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ARCHAEOLOGIA:

OR

MISCELLANEOUS TRACTS

RELATING TO

ANTIQUITY.

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MISCELLANEOUS TRACTS

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PUBLISHED BY THE

SOCIETY OF ANTIQUARIES OF LONDON.

VOLUME LV.

LONDON:

PRINTED BY NICHOLS AND SONS, 25, PARLIAMENT STREET.

SOLD AT THE SOCIETY'S APARTMENTS IN BURLINGTON HOUSE.

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[a] These Illustrations have been kindly lent by the Society of Antiquaries of Scotland.

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ARCHAEOLOGIA:

OR,

MISCELLANEOUS TRACTS,

&c.

I.—*A Clerical Strike at Beverley Minster in the Fourteenth Century.*

By Arthur F. Leach, *Esq.*, *M.A.*, *F.S.A.*

Read March 15, 1894.

Before relating the curious episode in the history of ecclesiastical institutions which forms the subject of this paper, a few words on the constitution of the institution concerned are necessary.

Beverley Minster, the quasi-cathedral church of the East Riding of Yorkshire, was, until its dissolution in 1548, a college of nine secular canons. The Archbishop of York *quâ* Archbishop was reputed (and disputed) founder, patron, visitor, head, and a canon, besides being lord of the manor and town of Beverley. Under him there was a provost, a kind of half-bursar, half-dean, also a canon, but not *virtute officii*, and seven other canons; the latter being, as at York, Lichfield, Ripon, the original number, pointing to a probable Culdee origin. Besides these were the usual three great officers or dignitaries—precentor, chancellor, and treasurer or sacrist; but these were not, as in most places, canons. Next came seven rectors-choral, called by the curious name of *berefellarii*; nine vicars-choral, one to each canon; a certain number of chantry priests, fifteen in number at the dissolution, but not more than seven at the time under notice; eight choristers, two incense-burners, and twenty-three clerks and inferior officers; a staff of seventy-seven in all.

What was the precise beginning of the struggle between Alexander Neville, archbishop of York, and the canons and other inmates of Beverley Minster, culminating in the year 1381 in a strike which was prolonged until 1389, does not appear. The documents relating to it, some found in the archbishop's registry at York, some in the Record Office, plunge us in true epic style into the midst of the fray.

"On the 27th of March, 1381," the *Processus sive Registrum* preserved in Archbishop Neville's register[a] informs us "that most Reverend Father in Christ . . . in the seventh year of his consecration" appeared at Beverley to hold a visitation of "his" collegiate church of St. John of Beverley "for the recreation," as the common form runs, "of the souls of the chapter, vicars, and clerks of the church." The summons for the visitation was dated "in our manor of Beverley" the 26th of February, 1380-1, and on the 2nd of March had been solemnly presented to the *locum tenens* of the chapter "in the chapter house at Beverley," one of the earliest extant mentions of this building now entirely vanished.[b] It is clear that relations between the archbishop and the inmates of the minster were already strained, and that disputes were anticipated as to this visitation, since ten days before it was begun, on the 17th of March, the archbishop had thought it necessary to publish "Letters Patent for removing fear." These state that "in case any desire to put forward frivolous or malicious excuses of fear or terror, wishing to close the path for such excuses, and, in our fatherly affection to consult the timid beyond what we are bound to do, we protest openly and publicly that it is not, and was not, our intention, wish, or design that any of the canons, vicars, or ministers of the church should be hindered in coming and going, or be disturbed, disquieted, or otherwise anyway ill-used." Accordingly he promises John of Scarborough, notary public, on the security of all his (the archbishop's) goods not to hinder them or do any violence to them, and commands his servants not to do them any harm. This proclamation he caused to be read by the Bishop of Dunkeld, who was apparently acting as a suffragan or curate-bishop, in a sermon in St. Nicholas' church; and again by the same bishop, when saying mass in full pontificals in the Black Friars' church in Beverley, before the chancellor, vicars, and other ministers of the collegiate church, and a large assembly of people. Next day it was published in York and Lincoln minsters, by special messenger.

This reassurance came too late. Already on the 20th of March, William English, the chapter's proctor, had in St. Paul's cathedral church, London, lodged an appeal to the Pope, and invoked the protection of the Apostolic See. Richard of Ravenser, archdeacon of Lincoln, senior canon and prebendary of St. Martin's, Beverley, also entered a similar appeal on the same day. From these appeals we learn some of the grounds of the quarrel. The chapter appeal states "That the

[a] Vol. ii. 3 pages after 59.

[b] *See* Mr. J. Bilson's paper on its remains, and what it was, in *Archaeologia*, Vol. LIV., pp. 425-432.

church was founded for seven canons only, and afterwards one other prebend, called the eighth, was lawfully created, which Sir Nicholas of Louth, called the eighth canon, now holds; which canons are bound to reside for certain months every year, and to them all the offerings and emoluments whatsoever coming to the same church ought to belong, and be divided amongst them, and there were never at any time more canons in number who had place in chapter." It then sets out the chapter's rights of jurisdiction in their liberty, and, amongst other things, their right to have "one summoner, servant, or beadle, to carry before the chapter in processions, especially on solemn days, a wand or staff, and to precede the chapter in processions, and also to serve citations." It then goes on to assert in terms that "there are eight canons and prebendaries in the said church, and not more, who have stall in choir and place or voice in chapter. Yet the archbishop asserts, though far from truly, that he holds a canonry and prebend in the said church, by reason of which it has been, and is, lawful for him to make his residence in the said collegiate church, and to reside as a canon there, and share in the emoluments and daily distributions, though he has a portion, or as it is commonly called a corrody, in it. And although the archbishops have held stall in choir, yet they have never had, nor has any one of them had, place in chapter, but they have always been without voice and place as canons in the chapter-house of the said church." The appeal also says that the archbishop claims the power of probate of wills and disposing of the goods of intestates in the chapter liberty, and in particular "has summoned the executors of the will of Sir Robert of Beverley, canon of the said church, although the registration of his will belongs to the chapter, and it was proved before the chapter or their legal deputy." The chapter next complain that the notice of visitation is too short, and they assert "that access to the presence of the said archbishop in this matter is not safe because of his fierceness, and the fear that they have of him and his." Ravenser's appeal is to the same effect, but adds that, "saving his reverence, the archbishop was and is notoriously a mortal enemy of him, Ravenser, and that the said archbishop, his men, and others adhering to him, have pursued and still pursue the said Richard with deadly hatred, so that through the craft of his enemies neither he nor his proctor nor his messengers have had or have safe access to the archbishop, especially in his own province, and above all in his domain of Beverley." Against the copy of this appeal, the archbishop has written in the margin, as if addressing the proctor, "Yet your messenger has come to the said archbishop with this writing, and his lordship has asked him to dinner, as he would have asked you if you had come, or your lord," meaning Ravenser himself.

On the 21st of March the chapter put in a second appeal, at St. Martin's-in-Ludgate, London, on the ground that the visitation ought to be held by the archbishop in person, and only once during his episcopacy.

The archbishop took no notice of these appeals, but on the day appointed for the visitation took his seat on a tribunal in front of the high altar. The notice of appeal was presented to him on behalf of the chapter by Thomas Kele, a messenger of the proctor, with a document asserting that the archbishop was aiming at the subversion of the whole foundation of the church; that he had exercised ecclesiastical jurisdiction in the chapter altar situated behind the choir, though it was notoriously exempt from his jurisdiction, and had held a chapter there daily, and punished those cited for their excesses, either in person or by his commissaries; that his commissaries had also caused the executors of one Richard Kyllyng, belonging to the exempt jurisdiction of the church, to prove his will before them, although it had already been proved before the chapter's assessor (*auditor causarum*). "The reverend father has also cited, or caused to be cited, Sir Robert of Lowthorp, executor of Master Robert of Beverley, and also of Sir Richard Killom, formerly vicar of Beverley Minster, and Adam de Bedall, executor of Sir Robert of Lynwoode, and John of Normanby, executor of John Swynfelte, all deceased, and, while they lived, notoriously under the jurisdiction of the chapter, the executors themselves being chaplains subject to the same jurisdiction, to prove the wills before him or his commissaries, although they had already been proved and approved by the chapter in due form." He had also summoned "Richard of Holm and Richard of Gretham, belonging to the same jurisdiction, and when they refused to appear had excommunicated them all with scant justice (*minus juste*), in spite of the decree of the general council. And the same lord archbishop had also caused to be cited a certain Margery, wife of Adam Coke of Beverley, a man living in the chapter's jurisdiction, for crimes committed within the exempt jurisdiction of the chapter, and wickedly compelled her to purge herself of the same." Moreover, "he had warned and straitly commanded, on pain of the greater excommunication, the chapter's summoner, no longer to exercise his office, nor to carry the wand or staff as is customary in the said church, or to do anything else pertaining to his said office. And, heaping grievance upon grievance, he pronounced excommunicate Sir William of Eleghton and Sir John of Sprottley, chaplains, immediate subjects of the chapter, after and in spite of their appeals from him to the apostolic seat and our lord the pope, though duly notified to him, too horribly inhibiting them from all communion with the faithful. And almost every day, at certain times and seasons, he had

caused a certain door of the choir to be shut, which always before used to be open, so that the canons and ministers of the church could go freely in and out of the said choir, and had the door guarded by his own servants, so that none could go in and out, thereby wickedly hindering and disturbing the divine office and those performing it, to the scandal of the church, and diminution of divine worship in the same."

The proctor who wrote the appeal then goes on, "and as I know not certainly where to find the said reverend father to give him notice of the present appeal within the time limited by law, and as I dare not, on account of well-grounded fear and torment of my body, such as may befall a man of ordinary firmness, personally inform the aforesaid reverend father of the said appeal, on account of the ferocity and power of the reverend father himself and his people," he protests that the appeal should stand good, and that he should have power to alter it if required.

On the 27th of March, when the archbishop opened his visitation, copies of these appeals were presented to him. He at once declared them frivolous and vexatious, and that he intended to proceed with his visitation. Thereupon he rose from his place, and entered the chapter-house, where the word of God having been declared by his official, a doctor of laws, whose text was "Visit this vine," he proceeded to his visitation.

Having had the citations for the visitations proved, the archbishop caused the members of the church to be summoned by the crier. First he called the eight canons, headed by Sir Richard de Ravenser, the senior canon and prebendary of St. Martin's altar. He had formerly been provost of Beverley, and was now archdeacon of Lincoln. Amongst the other canons may be noticed Nicholas of Louth, rector of Cottingham, whose brass is still in that church, and Master Walter Skirlaw, afterwards Bishop of Durham, who built Skirlaugh chapel, and left bequests for the tower of Howden church and the works at Beverley. Afterwards came the three officers, precentor, chancellor, sacrist, the seven berefellars, the eight canons' vicars, and the archbishop's vicar, seven chantry priests, and twenty-one clerks of the second form, fifty-five persons in all. Of these precisely three appeared, the precentor, Master Ralph Waleys, Thomas de Wyverthorp, one of the berefellars, and Adam de Waltham, chaplain (*i.e.* chantry priest). These swore fealty to the archbishop, the rest were pronounced contumacious, and the visitation was adjourned to the next day.

Before leaving the chapter-house, however, the archbishop "protested openly and in set terms that he was present, and wished to be present, in the chapter of

Beverley as a canon of the church, while *Preciosa*[a] was being said or sung there, and that as soon as it was finished, when he proceded or was proceeding in his visitation, he was, is, and intended to be, present as archbishop and ordinary of the place."

The next day, the 28th of March, he merely appeared, and summoned them again for the following day. On that day, the 29th, the vicars appeared in the flesh, "although they would not appear in the act of visitation. He asked them why they would not undergo his visitation, though it was clear that they were his subjects, and had been lawfully cited. They answered that they did not dare to appear before him because of the lord canons their masters, and immediately left the chapter-house laughing (*derisorie*). The reverend father immediately called them back again, and when they returned he warned them to mend their misbehaviour"; and summoned Richard of Ravenser and John of Wenlyngburgh for the 30th. Meanwhile the other canons were summoned for the 22nd of April to produce any documents on which they wished to rely.

The archbishop proceeded with his visitation *de die in diem;* and some of the members of the church began to give up the struggle and submit.

Thus, on the 30th, two clerks of the second form and one chantry priest came in and took their oaths. The vicars were then summoned for the 5th of April to show cause why they should not be excommunicated. The next day two of the berefellars came in and made their submission. On the 1st of April, four clerks and one vicar (the archbishop's) came in and purged themselves of their contempt. The next day two canons, Nicholas of Louth and Richard of Thorne, appeared in chapter, submitted to the archbishop's visitation and took the oath, but in a modified form, adding a clause that it was "without prejudice to the chapter, and without receding from their appeal." The chancellor and two berefellars also appeared unconditionally. Thus of eight canons two had appeared, and another came in later; of three officers, two; of seven berefellars, five; of seven chantry priests, one; of twenty-one clerks, six; or seventeen out of the whole number (fifty-five) summoned on the 5th of April. The vicars came in a body, and the archbishop warned them to submit to his visitation or show cause why they should not. "Going aside they deliberated, and, immediately returning, said they could not swear obedience to him, as they had already sworn it to the chapter, and they had been ordered by

[a] The versicle and response at prime, "Preciosa in conspectu domini mors sanctorum ejus," after which all went out to the chapter-house, where the Martyrology was read and the business of the day transacted.

the chapter and canons, their masters, not to swear obedience to the archbishop or to anyone but themselves; and so saying they departed from his presence."

On Friday, the 5th of April, the archbishop's messenger appeared, and said that the vicars had departed from the church, because they were unwilling to submit to his visitation, and had left the church unserved. The archbishop, hearing this, "wishing rather to exercise mercy than rigour, awaited the said vicars at the request of the two canons until the next day, and caused them to be personally summoned; but next day the messenger brought word that he had looked for the vicars in the church and town of Beverley but could not find them, and was told that they were no longer in the diocese of York, but had departed towards London; so that the church might stand unserved to the opprobrium of the said reverend father." Thereon the archbishop instantly excommunicated them.

On Monday, the 8th, the archbishop entered the choir early at mattins, as was his wont, and seeing that the church would remain unserved through the absence of the canons and vicars, his heart being pierced with grief, he caused divine service to be properly performed by his own clerks; and three days afterwards summoned from York Minster a sufficient number of vicars expert in chanting and singing, and in other matters relating to the divine office, and placed them in the church to perform divine service in the place of those who had gone away, so that the church might not stand unserved through the malice of these malignant absentees against their prelate." He also summoned them again for the 22nd of April.

Here, then, we have the clerical strike fully developed, with the usual incidents which accompany the modern strike of more mundane persons. We have, to start with, the uncompromising, not to say violent, demeanour of the superior; the endeavour, successful in some instances, on the part of the superior to detach weak-kneed brethren from the common cause; the cessation of work by the strikers and their departure from the premises on which they worked in the hope of embarrassing the person who claimed to be their master; the introduction of "blacklegs" from other places, and, as we learn from another source, the discontent of the blacklegs. Finally, as we shall see, after great sufferings on the part of the strikers, came the complete defeat of the superior.

Before the day arrived on which the vicars had been summoned to return, namely, on the 21st of April, a royal sergeant-at-arms arrived with letters patent from king Richard II., telling the archbishop to stay proceedings and appear before the king in council at Westminster within the octave of St. George, *i.e.* before the 30th.

On the 22nd another canon, Richard of Chesterfield, appeared and made his

submission. The three canons who had now submitted were ordered personally to reside and perform the service. They protest that it had not been the habit for any canon to keep full residence, but Chesterfield and Smyth have done so more than the others.

The two leaders of the strike, Ravenser and Wellingborough, are excommunicated.

Next day the three canons are ordered to produce the documents on which they rely. They accordingly produce

1. An ordinance, of unknown date, as to the order of seats in the Bedern or refectory, and the food to be supplied to the canons and others;
2. An ordinance of Archbishop Greenfield, dated the 17th of April, 1307, curtailing the period of residence required of the canons to twelve weeks;
3. Certain ordinances made by the chapter to the same effect.

The last two will appear in the Surtees Society's volume, which will contain the Beverley Chapter Act Book, and need not be reproduced here.

The earlier ordinance is so curious and interesting a document that I give it at length. A very mangled English version of it, reduced mostly to complete nonsense, appears in Poulson's *Beverlac*,[a] taken from Warburton's Collections[b] in the British Museum, from a copy of a document which had been in the possession of "Master Sedgwike, vicar of Marflete, who kindly gave it to me," the original being "of the date of Henry II., Richard, or John," a sufficiently wide limit. That the original was ancient is clear, because in the copy of it in the Archbishop's Register there are several mistakes, which appear to be due to misreading. By a collation of the two copies I have, I hope, arrived at a fairly accurate text. (See Appendix.) The original would be a very valuable find. I translate it as follows:

"Order for the Ministration of the Refectory in the Bedern.

Since, by reason of the carelessness and negligence of the servants, complaints have oftentimes arisen between the Provost and Canons as to the service in the Dining Hall, the Archbishop and Provost and the Canons themselves, in person assembled, have determined that the order of sitting and the service of provisions, which seemed in former times to have been left without ordinance,

[a] George Poulson, *Beverlac; or the Antiquities and History of the town of Beverley, in the county of York, and of the Provostry and Collegiate Establishment of St. John's* (London, 1829), ii. 532.

[b] British Museum, *Lansdown MS.* 896, f. 132.

shall henceforth for ever be ordered as follows: provided, however, that the ancient dignity of the Canons shall be in no wise lessened by the present constitution; but, saving in all things their custom, licence, and power, their authority in all things within and without shall remain unshaken.

The order of sitting in the Refectory shall, therefore, be between them according to the order of succession; to wit, that, round the Provost, the seat of each Canon shall be where the place of his predecessor was; and in like manner, among the Vicars, the place of the successor shall be where the seat of his predecessor was.

On week-days, not being festivals, that is on Monday, Tuesday, and Thursday, if it shall be flesh time, they shall have four general dishes at dinner, honest both in quantity and quality. Of these, the first shall be according to the season, either pork or beef, and these not without vegetables, either beans or peas or cabbage; the second, either fresh mutton or fresh pork; the third, either chicken, or goose, or game (*lit.* or something which is the subject of fowling or hunting); the fourth, any kind of soft meat, either of mince (*mortariolis*), or of brawn (*braunell*), or of rissoles (*russolis*), or such other things as shall be convenient and honest. At supper (*vesperam*), two large dishes of meat, the one boiled, the other roasted; but if meat cannot be got, the one of meat, the other of cheese or eggs, or else of fish.

On Wednesday and Friday, and on Saturday, at tierce, the first dish shall be of vegetables; afterwards three general dishes of fish; but if fish cannot be got, its place shall be supplied by something honest and convenient. At supper (*vesperam*), two large dishes of fish, or if necessity shall require, other things which are honest and convenient. But if in these three days Rogation days shall intervene, or if there shall be any vigil, or in any other way it shall be a fast-day, a fifth dish shall be added because of the fast.

And on Sundays and common festivals, or those of three lessons, as it is from Easter unto Pentecost, or of nine lessons, at tierce a fourth dish shall be added, which shall be of soft meat as aforesaid. But if such feast shall fall on Wednesday, Friday, or Saturday, a dish shall be added in like manner; which dishes, as well of meat as of fish, shall be seasoned as they ought to be, either with pepper or cummin, or other savory sauce.

On the greater feasts, when the invitatory is sung by four, and the respond by two or three, as the feast itself is more solemnly performed than common feasts, so on the said feast both dinner and supper shall be supplied more fully than usual, viz. on the four days of the Nativity of our Lord, the day of

Circumcision, the Epiphany, and the Purification of the Blessed Mary, the four days of Easter, the Ascension Day, and the four days of Pentecost, and the day of the feast of St. John in May, and St. John the Baptist, and the day of the Apostles SS. Peter and Paul, and the day of the Assumption of the Blessed Mary, and the Solemnity of All Saints; as these days are celebrated joyfully and solemnly in the Church, so in the Refectory shall they be cheerfully honoured, viz. in simnel or in wastel, and in various entrées (*intermissis*).

In this manner the service of the Refectory shall be conducted throughout the whole year, the Advent of our Lord and Lent excepted; in which, both for the continuation of fasting and for the increase of the service, the service of the Refectory shall be enlarged, as in pulse and other pittances such as can be obtained, according to the season.

There shall be the same quantity and quality of bread and ale and number of dishes for the Canons and their Vicars, except that the said Canons shall dine and sup singly and alone, the Vicars two and two. But if a Canon shall not be in the Refectory he shall have his full corrody wherever he shall be. So also shall a Vicar have his full corrody if he shall be absent for any necessary or honest cause, which cause shall concern either the Church or a Canon. And if a Canon or Vicar shall have been bled, he shall be served according to his quality both with bread and ale, and from the kitchen one dish either of flesh or fish, according as the usage of the day shall be; at tierce and at supper as heretofore ordained. But if he shall be ill nothing shall be taken from his corrody.

And inasmuch as the management of every house is bettered by the diligence of the servants, and by the negligence of the same is made worse, the Provost shall, with the assent of the Canons, appoint honest and diligent servants; who, if they shall be negligent in their service, and having been reprimanded and punished, shall remain incorrigible, shall be removed by common council, and better ones put in their place.

Also it was determined concerning the seven poor men who have their corrody in alms for seven Canons in the Refectory, that at tierce they shall have two dishes and one at supper. And that each Canon shall know which of the said seven belongs to himself. And when this poor man dies, lest the Canon to whom he seems to belong should attempt to receive or usurp anything, it was determined as aforesaid by the common council of the Provost and Canons that another shall be substituted, and that he shall then be considered the almsman of the said Canon. Also it was determined that if any clerk of honest behaviour and assiduously serving the Church shall not have sufficient livelihood from another

quarter, then, for the improvement of the service of the Church, he shall be received in the place of a poor man.

But whatever has been said concerning the corrody of the Canons either within the Refectory or without (either in blood letting or in illness), the same fully applies to the Churchwarden (*custodi ecclesiae*) and the Schoolmaster, except that they do not eat alone.

Concerning the quantity of bread and measure of ale nothing has hitherto been said, inasmuch as its weight and measure has not been agreed upon, but by common consent they are to be greater and better than formerly.

Now those for whom this institution is ordained are eight Canons, the Churchwarden (*custos ecclesiae*), and the Schoolmaster, eight Canons' Vicars, and the Vicar of the Archbishop (whose portions and wages is the business not of the Archbishop but of the Canons in common), the Provost of the Archbishop, in number twenty in all. There were others for whom provision must be made, if not so fully yet duly and well, viz.: the Clerk of the Churchwarden, the Ringer of the Bells, and the Master of the Works (*magister operis*)."

The purport of this document being produced by the canons was to show (1) that the archbishop was not reckoned as a canon; (2) that when statutes were made to regulate the internal affairs of the establishment they could only be made with the consent of the canons, and a saving of their rights.

No discussion seems to have taken place on these documents. But on the part of the archbishop, an ordinance of archbishop Romanus made in 1290 was produced, which fixed the residence of canons at twenty-four weeks in each year, and required of the officers and vicars continual residence throughout the year. It is significant that it appears on the face of this document that the ordinance was made with the consent of the canons, and therefore tells strongly against the archbishop's main contention. Accordingly there is a direction in the margin, apparently in his writing, that it should not be entered on the record of the proceedings.

On the 24th of April the three canons who have come in urge the archbishop to proceed no further after the royal writ. But he only answered "Brothers and friends, the case of the visitation and correction and jurisdiction on which we insist is merely spiritual, and therefore not cognizable by any lay judge. And, moreover, you and all and each of you who have obtained these royal prohibitions against my jurisdiction, to hinder us in our visitation, or have given your counsel and help in obtaining it against the liberty of the Church, are (and they are)

ipso facto damnably intangled in the sentence of the greater excommunication laid down by the canons; and we shall proceed against you as justice demands, notwithstanding the king's letters."

And he accordingly instantly declared them contumacious, and for their contumacy shut them out by his decree from producing any more evidence.

Again, they beg him with urgent insistence (*ardua instantia*) to obey the royal writ. The archbishop protests he is ready to obey the king in all things, "saving the rights of our church of York and our jurisdiction, and visitation of our church of Beverley," a conscious or unconscious imitation of Becket's great saving clause, "saving the honour of my order." He then gives the canons till the 11th of May to show cause why they should not reside, as required by the statutes.

When that day comes he revokes Greenfield's ordinance, which had been in force for over seventy years, and restores that of Romanus, which had only lasted eighteen years.

On the same day another royal writ from the king in council, dated the 6th of May, arrives, and there the record suddenly breaks off.

We get the sequel of this story however from the Parliament Rolls, published by the Record Commission, in a petition to the king in parliament in 1384, from five of the vicars choral, one of the berefellars, and one chantry priest, who were still on strike, or rather locked out, asking for re-instatement. From this we learn that "Sir Robert Ross, knight, of the king's chamber, and Richard Hembrigge, sergeant-at-arms, the bearers of the royal writ, were met by the archbishop with a great multitude of the people of Beverley and the neighbourhood, clad in hoods of his livery given solely for the purpose of maintaining his quarrel, and would not suffer Robert and Richard to perform the command of the king and his council, and so greatly menaced them, that they dared not for fear of death proceed in that business, as was well proved afterwards before the king's council."[a]

It appears from another entry in Archbishop Neville's register[b] that Richard Ravenser himself was deprived of his prebend at Beverley by the archbishop, who on the 30th of August, 1381, presented Master Anthony of St. Quintin, rector of Settrington, to it, and invested him "by delivery of our cap (*birretta*)" in his great chamber at Cawood. But Master Anthony had some difficulty. When he presented himself at Beverley before Nicholas of Louth, "sitting in the chapter-house and making a chapter," the latter refused to admit him "because he had heard of a prohibition by the king against anyone doing anything against Ravenser." The archbishop however had taken care to be present, and admitted him himself,

[a] *Rolls of Parliament*, iii. 183. [b] Reg. Neville, i. 65*b*.

"clothed in the canonical habit," and as a sign of his admission the Archbishop and Nicholas kissed him, and according to custom caused him to be served with bread and ale in the Bedern. This Nicholas was, it is to be feared, somewhat weak-kneed, if not a trimmer and time-server. But it is not perhaps surprising, as in December, 1378,[a] a controversy had taken place between him and the other canons as to his share of the offerings in the church, which had been decided by the archbishop in his favour, and the archbishop's decision was that he the "eighth canon," the prebendary of St. Katherine's altar, was to have half the offerings, both at the high altar, and the shrine belonging to the said altar, if under 100 marks, and if 100 marks or upwards, then a fixed sum of 50 marks. This regulation reveals an astounding amount of revenue derived from St. John of Beverley, which made this prebendary the richest of all, especially as, if in residence, he was also to have his share of the other half equally with the other residentiaries. No wonder Nicholas could afford to build the tower of Cottingham church.

The other canons probably betook themselves to other places where they held preferments. Walter Skirlaw, for instance, was an official of the Crown. Henry Snaith was the same, and a canon of Howden and York to boot. But the vicars and chantry priests on strike had no other means of subsistence when they were locked out. For five years they lived at Lincoln, supported by Ravenser. But when he died, in 1386, without remembering them in his will, they were cast adrift, and had to become vagrants and mendicants; at least, so said the petitioners, when they asked for reinstatement until the case was determined by the court of Rome. In answer to this petition "it was accorded and assented in Parliament by good deliberation that a commission should be made to certain sufficient persons of the country to restore the suppliants to their benefices and put them in full possession of them." There seems to be some mistake in the Parliament Rolls, or by their editor, as to the date of this petition. It is given under the seventh year of Richard II., which is 1383-4. But in the petition it states that the petitioners had been living at Lincoln, or Nicole, as it is called in the Norman French of the petition, for five years and more; and as Richard of Ravenser's death is fixed by the probate of his will[b] to 1386, it is clear that the petition must belong to some later year than 1383-4. It cannot, however, be

[a] Reg. Neville, i. 66.

[b] *Memoirs illustrative of the History and Antiquities of the County and City of Lincoln, communicated to the Annual Meeting of the Archæological Institute of Great Britain and Ireland, held at Lincoln, July, 1848* (London, 1850), 316.

later than 1388, in which year archbishop Neville was impeached, proclaimed a traitor, and fled the kingdom.

The petition and its result have been hitherto all that has been known about this extraordinary case. On them Oliver, in his *History of Beverley*, has built, as he was in the habit of building, a muddled medley of romance, chiefly from "his own pure brain."

"Alexander Nevile, archbishop of York, taking advantage of the confusion in which the late occurrences had involved the country; and conceiving that the civil interdict which had been pronounced against the town of Beverley would lend a sanction to his avaricious designs, seized, without ceremony, on the revenues of the collegiate church, plundered the vicars and other ecclesiastical dignitaries, and violently expelled them from their benefices without due process, in contempt of the royal authority, by which they were protected, and placed other clerks, of his own appointment, in the vacant situations." [a]

By the "late occurrences" Oliver meant Wat Tyler's rebellion, and by the "civil interdict" he meant the exemption of the town of Beverley from the general pardon proclaimed after the rebellion broke down. Unfortunately for Oliver, he had put the cart before the horse (if, indeed, the two events had any connection at all), as the archbishop's quarrel with the minster had come to a crisis two months before Wat Tyler's rebellion had been heard of.

It remains to consider who was in the right, and who was in the wrong, in this protracted struggle. It must be remembered that both parties had ample precedents for the importation of physical force and spiritual violence into a purely ecclesiastical dispute, and that a constitutional and not a doctrinal one.

The quarrel for precedence, or equality, between the archbishops of Canterbury and York, particularly on the right of either to bear his cross erect in the province of the other, was carried on, literally *vi et armis*, from the days of Thomas, the first Norman archbishop of York, to the days of Thoresby, the predecessor of Alexander Neville, the archbishop with whom we are now concerned. It came to its height when in 1176 archbishop Roger, of York, attended an ecclesiastical council at Westminster, presided over by a papal legate, and Richard, the archbishop of Canterbury, having set himself on the legate's right hand, Roger sat down in Richard's lap; whereon the bishops and other clerics, being most of them in the province of Canterbury, pounced on Roger and threw him down, cuffed and beat him to their hearts' content, trampled him

[a] George Oliver, *The History and Antiquities of the Town and Minster of Beverley, in the County of York* (Beverley, 1829), 147.

under their feet; and when he was allowed to rise with a torn cope, covered with dust and shame, laughed at him; and when he left the assembly to seek the king's ear shouted after him, "Away, away, betrayer of St. Thomas, his blood is still upon thy hands."

It was not much abated when, so late as 1312, archbishop Greenfield of York, on his way to the council at Vienne, met with such rough usage at the hands of the servants of the archbishop of Canterbury that he had to get a royal writ to protect him on his return. In 1314 he had an opportunity of retaliation when the Court was at York, and the archbishop of Canterbury had to go there. Greenfield directed the dean and chapter of York, and his official or chancellor, to resist the archbishop if he tried to carry his cross, and the archdeacon of Nottingham, then part of the diocese of York, was to meet him on his entrance and make him put it down. It was not till 1352 that the quarrel was finally ended, by allowing each primate to carry his cross in the other's province. If the bearers of the two crosses met in the open street they were to walk abreast, but in a gateway or narrow passage the cross of Canterbury was to have the precedence. "Thus," says Thomas Fuller, "when two children cry for the same apple the indulgent father divides it betwixt them, yet so that he giveth the bigger and better part to the child that is his darling."

Next to York, Beverley was most closely connected with Lincoln; and there, in 1245, was a battle royal between Robert Grosseteste and his chapter as to the right of the bishop to visit the chapter. They exchanged anathemas and excommunications, the bishop sending the chapter, and the chapter sending the bishop to perdition, but the chapter had the best of it controversially, as they remarked that as the bishop was not "a gentleman born, it was no wonder that he did not behave like one." But though the chapter scored in controversy, the bishop won in substance, and the pope confirmed his right to visit.

As early as 1290 the right of the archbishop Romanus to visit the chapter of Beverley had been disputed; but the dispute cost Robert of Scardeburgh, dean of York, who was one of the canons, not only his canonry at Beverley but his deanery and prebend at York.

On the point of visitation, indeed, most chapters quarrelled with their bishops. There can be little doubt that the bishops generally were right in their insisting on their right to visit. At Beverley there can be no doubt the archbishop had the right. Indeed the chapter hardly contested the right, and only put forward the absurd pleas (i.) that he could only visit in person, and (ii.) only once during his episcopate. That he could not appoint commissioners to act for him was a thesis

utterly opposed to the whole practice of the Middle Ages as to all duties and rights, and especially the exercise of jurisdiction, which was founded on the assumption, *qui facit per alium facit per se.* Was not the chancellor of the University of Oxford himself only a commissioner of the chancellor of Lincoln, and the vice-chancellor a mere deputy of that deputy? The chapter of Beverley themselves exercised all their jurisdiction by a deputy, their *auditor causarum.* It was the habitual practice for bishops to visit by deputy.

As regards the second point, that the archbishop could not visit more than once, that also was an untenable proposition. Archbishop Romanus certainly visited Beverley twice, and deprived, as we have seen, a canon, who was also dean of York, for refusing to appear at his second visitation.

But on every other point the archbishop was wrong. He may have been right as a matter of antiquarianism, but he was hopelessly wrong as a matter of historical usage and constitutional law. If we go to the historical root of things, probably the archbishop, among his canons, was merely *primus inter pares*, a president among his ministers, who probably had all things in common. But it was idle for an archbishop in the fourteenth century to pretend to go back to a state of things which had ceased by the eleventh century, undoubtedly before the Conquest, and probably long before. After the chapter estates were divided from those of the archbishop, and the archbishop had the lion's share, it was absurd for him to claim to come in and take a new share, as a simple canon. Even if his corrody was a recognition of his ancient status as a canon, and the appointment of his vicar choral a further reminder of his historical position, the usage of centuries was against him. If at Lincoln Minster, the origin of which is known to a year (1090), the relation of the bishop to his chapter was so far forgotten two and a half centuries afterwards, that even his right of visitation was absolutely denied, in how much worse a position stood the archbishop to Beverley Minster, whose origin is disputed and first constitution unknown? His attempt to preside in chapter, and reside as a canon, was much the same as king James the First's attempt to assert his right to preside in the Court of King's Bench. John had presided personally in the King's Bench, especially if there was aduel on; why not James? It was in this same spirit of the historical pedant, mistaking history for law, that archbishop Neville advised Richard II. to obtain the opinion of the judges at the Council of Nottingham, that no ordinances in restraint of the royal prerogative could bind the king; advice which cost the archbishop his see and the king his throne. In his dealings with the constitution of the nation, as in his dealings with the constitution of his churches, Neville showed an utter contempt for

custom. Yet custom, far more than any written documents, then, as now, was the constitution.

It may be that the archbishop was in the right in wishing to enforce the personal and continual residence of canons, though, even theoretically, there is a good deal to be said on the other side, and the practice of non-residence had existed for two hundred years. But in his high-handed repeal of Greenfield's ordinance, which had been in force for seventy years, on his own *ipse dixit*, he was acting in the most flagrant contradiction to what he must perfectly well have known to be the law. A bishop in chapter, as regards law making, was precisely in the same position as the lord mayor in common council, or the king in council or parliament. Though the enactment runs in the name of the king, or mayor, it can only be made with the assent and consent of the parliament, or council. And Neville knew the written law was dead against him, when he caused archbishop Romanus' ordinance to be omitted from the record of the process, which he ordered to be bound and sent to the pope.

Whether his motives were good or not we have no means of judging. He came of a turbulent and violent family. His acts combined all the pride of the prelate and the arrogance of the aristocrat with the violence of the border baron. He was just the kind of person to wreck a constitution or "perish in the attempt."

In corroboration of this view of him, curious testimony may be adduced from a contemporary and independent source. In Canon Raine's *Historians of the Church of York and its Archbishops*, an account of Neville is given by an anonymous York chronicler.

"*Archiepiscopus iste*," he says, "unmindful of his oath made to God and St. Peter on the day of his enthronement, in the first year of his enthronement, and every year before," which apparently means as a canon, "assailed the dean and chapter of York, and especially Master John Clifford, then treasurer, and also the canons of the collegiate churches of Beverley and Ripon; endeavouring by all means possible to infringe their liberties and ancient laudable customs. Amongst other things, to order about (*imperare*) the ministers of the cathedral church, contrary to its statutes and ordinances, and to dispose of them at his own will: inasmuch that A.D. 1381, on the vigil of Palm Sunday, he compelled six vicars-choral of York to go to Beverley and there perform the choral office, in the place of the same number expelled thence: which six vicars of York for two years and more remained at Beverley, and about the feast of St. William in the summer

returned to York, the aforesaid Beverley vicars being restored, by authority of Richard II. and of Parliament, in A.D. 1388.

Also, in the first week of Lent A.D. 1384 he moved the consistory, synods, and convocations from York to Beverley, and there held them for four years.

Many absurdities and wrongs, far graver than these, he wrought against the dean and chapter and other ministers of his church, as, by thundering sentences of suspension and excommunication, or often without right dragging them to unlawful examinations.

Afterwards through the great discord between the archbishop and his subjects, continued through ten years, as well in the Court of Rome as here, when sentence had been definitely given against him in the Court of Rome, the inconvenience grew to such a height that King Richard II. in A.D. 1386 took the temporalities of the archbishopric under his care, and confiscated all the goods of the said archbishop."[a]

Two years later, as we have already seen, he attempted to subvert the constitution in the interests of despotism in the kingdom, as he had done in his minsters, but was proclaimed a traitor by parliament at Nottingham on the 5th of August, 1388, and had to fly the country in disguise. The Pope at Richard's request translated him to St. Andrew's, but the Scotch would have none of him, nor of the "Anti-Pope" as they thought him, who affected to translate him, and he eventually became a schoolmaster at Louvain, and died in poverty.

That some of the things he wished to do were good, or, at least, such as would be approved by purists, is, indeed, not to be denied. For instance, one of the points on which he quarrelled at York was about the performance of mattins. It appears that, at York, a convenient custom had sprung up of saying mattins over-night after evensong, as some schoolboys are said to clean their teeth, or even wash, over-night ready for the next morning. The archbishop insisted that they should be sung at dawn, at the proper mattins hour. But, like Strafford, he was one of those people who, even if they want to do something right, always do it, and seem to prefer to do it, in the wrong way. He would rather command people than persuade them, and force a thing through with the greatest possible friction, than take the trouble to get it done quietly. If in wrecking constitutions he wrecked his own career, we can only concur in the verdict of his contemporaries that it served him right.

[a] James Raine, *The Historians of the Church of York and its Archbishops* (London, 1886), Rolls Series 71, ii. 423.

APPENDIX.

Ordinatio de Canonicis in refectorio de ferculis in Beverlaco.

Quoniam de ministratione refectorii, propter in curiam et negligentiam ministrorum, sæpe inter Præpositum et Canonicos querela oriebatur, placuit Archiepiscopo et Præposito et ipsis canonicis personaliter congregatis, ut ordo sessionis et ministracio procurationis, quæ minus antea videbatur ordinata, taliter deinceps inperpetuum ordinetur; ita tamen ne presenti institutione prisca canonicorum dignitas in aliquo minuaretur, set salva in omnibus eorum consuetudine, licentia, et potestate, auctoritas eorum per omnia intus et extra inconcussa permaneat.

Erit itaque inter ipsos in refectorio ordo sessionis secundum ordinem successionis, scilicet ut circa Præpositum, ibi sit sedes canonici ubi fuit locus antecessoris. Similiter et inter vicarios eorum, ibi erit locus successoris ubi fuit sedes sui predecessoris.

Diebus ferialibus absque festo, hoc est ij^{a} iij^{a} et v^{ta} feria, si tempus carnis fuerit, quatuor generalia fercula habebunt ad prandium, honesta tam qualitate quam quantitate. De hiis, primum erit, secundum quod tempus postulaverit, vel porcina, vel vaccina, et illud non sine legumine vel fabis vel pisis vel caulinis, et hoc tempore oportuno. Secundum, vel recens ovina vel recens porcina. Tertium, vel galina, vel auca, vel aliquid aucupii vel venationis. Quartum, aliquod genus mollis cibi, vel de mortariolis, vel de braunell vel de russolis, vel aliquod hujusmodi quod conveniens sit et honestum. Ad vesperam duo plenaria fercula carnis, unum elixum, alterum assatum. Quod si caro reperiri non poterit unum carnis; alterum vel casei vel ovorum vel etiam piscis. Quarta vero, et sexta feria et Sabbato; ad tertiam, primum aliquod leguminis, deinde tria generalia piscis; quod si piscis non potuerit inveniri, suppleatur aliquo honesto et convenienti Ad vesperam, duo plenaria piscis, vel si necessitas fuerit, alia, quæ honesta sunt et convenientia. Quod si hiis tribus diebus Quatuor Tempora occurrerint, vel aliqua vigilia, vel alio modo dies Jejunii fuerit, quintum ferculum propter Jejunium addetur.

Dominicis vero diebus et festis communibus, vel trium lectionum, sicut est a pascha usque pentescosten, vel ix lectionum, ad tertiam, quartum addetur ferculum quod sit mollis cibi, sicut supradictum est. Si autem quarta vel vj^{a} feria, vel Sabbato, hujusmodi festum evenerit, similiter hujusmodi addetur ferculum. Quæ fercula tam carnis quam piscis secundum quod debent vel piperato vel cuminato, vel aliquo alio sapido condiantur condimento. In majoribus vero festis quando Invitatorium a quatuor cantatur, et responsorium a binis et trinis, sicut ipsum Festum celebratius agitur quam communia festa, ita in ipso festo, et prandium et cœna plenius solito suppleantur; sane quatuor diebus Natalis Domini, et die Circumcisionis, et Epiphaniæ, et Purificationis Beatæ Mariæ, et iiij diebus Paschæ, et die Ascensionis et iiij^{or} diebus Pentecostes, die festi Sancti Johannis[a] in maio, et die Sancti Johannis Baptistæ, et die Aposto-

[a] *i.e.* St. John of Beverley, 7th May.

lorum Petri et Pauli, et die Assumptionis Beatæ Mariæ, et solempnitate Omnium Sanctorum. Sicut isti dies festivius et solempnius in ecclesia celebrantur, ita in refectorio festivius honourabuntur; videlicet in seminellis, vel vastellis, et variis intermissis.

Hoc modo ministrabitur in refectorio, excepto Adventu Domini, et Quadragesima, in quibus et pro continuatione jejunii, et pro augmento servitii augebitur ministracio Refectorii, sicut est in pultibus et diversis pietatibus, quemadmodum pro oportunitate temporis haberi poterit.

Erit vero eadem qualitas et quantitas panis et servisiæ, et numerus ferculorum, canonicis et vicariis suis, excepto quod ipsi canonici singulariter et sibi prandebunt et cænabunt, vicarii vero bini et trini. Quod si canonicus in refectorio non fuerit, ubicunque sit, plenarium corrodium habebit. Similiter et vicarius, si interveniente aliqua necessaria causa vel honesta defuerit, quæ tamen causa vel ad ecclesiam vel ad canonicum pertinet, habebit plene corrodium suum. Si vero canonicus vel vicarius minutus fuerit, convenienter eis et de pane et de cervisia, secundum personam suam ter in die serviatur. Habebit etiam ad matutinas panem et cervisiam, et de coquina unum ferculum vel carnis vel piscis, secundum quod diei qualitas in se habuerit: ad tertiam et ad vesperam sicut alio tempore constitutum est. Si autem infirmus fuerit, nihil omnino ei de corrodio suo subtrahatur.

Quia vero procuratio omnis domus per ministrorum diligentiam melioratur, et per eorum nequiciam pejoratur, eligat Præpositus honestos et diligentes ministros, et eos assensu canonicorum in ministeriis præficiat. Qui, si in ministerio quocunque, negligentes fuerint, et conventi et castigati incorrigibiles extiterint, communi consilio amoveantur, et pro eis meliores substituantur. Placuit etiam de septem pauperibus, qui pro vij canonicis in refectorio suo corrodium suum habent in elemosina, ut ad terciam duo fercula habeant, et unum ad vesperam, et ut unusquisque canonicus sciat quis de illis septem ad se pertineat. Qui pauper cum obierit, ne ipse canonicus ad quem pauper pertinere videbatur, aliquid precipitanter vel usurpanter de altero substituendo moliatur, placuit ut prius communi consideracione Præpositi et canonicorum alter substituatur, et tunc demum elemosinarius ipsius canonici reputetur. Placuit etiam, ut si quis clericus, honeste se habens et ecclesiam frequentans, aliunde victum plene non habuerit, ad meliorandum servitium in ecclesia ipse in loco pauperis suscipiatur. Quicquid autem de corrodio canonicorum dictum est, vel in refectorio vel extra, vel in minucione vel infirmitate, hoc idem per omnia servitur custodi ecclesiæ, et Magistro scolarum, excepto quod ipsi non singulariter comedent.

De quantitate vero panis, et mensura servisiæ, ideo hucusque tacitum est, quia necdum inter eos de pondere convenerat nec mensura, quæ communi dispositione majoranda sunt et melioranda. Sunt autem quibus hac institutione serviendum est, viij° canonici, custos ecclesiæ, et magister scolarum, octo canonicorum vicarii, et vicarius episcopi, cujus positio et merces non ad Archiepiscopum sed ad canonicos communiter spectat, præpositus Archiepiscopi. Numero viginti sunt. Et alii quibus, et si non adeo plene, tamen ex debito, serviendum est, et bene, clericus custodis, tintinnabulorum pulsator, et magister operis etc.

II.—*Of the methods used in making and ornamenting an Egyptian Rock Tomb.*
By Somers Clarke, *Esq.*, *F.S.A.*

Read June 14th, 1894.

Although in his invaluable work on the Ancient Egyptians, Sir Gardner Wilkinson tells us a great deal about the sculpture, the painting, and the furniture of the tomb, and although Lepsius, Prisse d'Avennes, and others give us much information, I have nowhere found that any writer has followed the subject through from the time the order was given to make the tomb until it was completed ready to receive the mummy of the owner. The few notes I now lay before the Society were always made on the spot. My effort has been to draw the evidence from the excavations themselves.

It is perhaps hardly necessary to say that the ornamented room or rooms in a tomb were not the actual places of burial. To quote the words of Sir G. Wilkinson,[a] "besides the upper rooms of the tomb, which were ornamented, were one or more pits varying from twenty to seventy feet in depth, at the bottom or sides of which were recesses, like small chambers, for depositing the coffins. The pit was closed with masonry after the burial had been performed, and sometimes reopened to receive other members of the family. The upper apartments were richly ornamented with painted sculptures, being rather a monument in honour of the deceased than the actual sepulchre, and they served for the reception of his friends, who frequently met there and accompanied the priests when performing the services for the dead."

We must not forget that there were two sorts of tombs used by the ancient Egyptians. One, now called the *mastaba*, which, with the exception of the mummy pit, was built more or less above ground, and the pyramids themselves may be

[a] Sir J. Gardner Wilkinson, *The Manners and Customs of the Ancient Egyptians* (New Edition. London, 1878.), iii. 436.

included in this class; the other consisting of apartments and pits excavated in the rock.

It is more especially with the latter class that I propose to deal.

The sides of the Nile valley, from Cairo to a spot about half way between Esneh and Edfu, are composed of limestone rock; above this spot the river flows through sandstone. In both formations the beds of good close stone are frequently of great thickness, but it often happens that the beds of hard material are but thin, and are over and underlaid by strata which yield readily to the action of the weather, or are so full of faults and cracks that no sound and lasting work can be executed in the material. If the thin beds of good stone occur, as they often do, near the site of some ancient city, and where a necropolis must be made, it is evident that the tomb-makers must have found themselves in no little difficulty, as it is only in the good stone that tombs of the first quality could be excavated, whilst in the beds of inferior material that defiance of time which was so essential a feature of the resting-place of the mummy could not easily be secured. From an examination of the tombs themselves we can see that the rich man in death, as in life, picked out the best place for himself. He not only contrived to cut his mummy-pit in hard sound rock, but the elaborately ornamented tomb chamber above had an equal advantage. The man of lesser degree had to content himself with rock of an inferior quality, but it will generally be found that the mummy-pit itself goes down into rock as hard as any that the strata in the place afford. The chamber above is the part of his tomb which comes off second best. There are yet other tombs in which the chamber above was constructed chiefly of brick, the mummy-pit only being in the rock.

Let us suppose that a man of importance proposes to make his tomb.

The necropolis is situated at the foot and on the slope of a hill. The hill being composed of strata of good and bad rock, its slope has formed itself into a series of cliffs; the good rock, resisting the action of the weather, makes a more or less vertical face, whilst the bad rock crumbles and presents a front more or less sloping.

The accompanying photograph (Plate I.) from Beni Hassan shews well the conditions with which the tomb-makers had to deal. Above the opening into the chamber we see the rock in slopes and steps, the slopes being formed in part of the *débris* fallen from the steps. In a good deep bed the entrance and the chamber has been cut, the face of the rock being made vertical, and the flanking pieces showing the natural slope of the face of the hard material. It can be seen that in the example given there is a faulty vein which runs horizontally through the thick bed.

ROCK-CUT TOMB AT BENI-HASSAN.

Already there are very many tombs cut in the hill side. The great man has to make the best of the good places still unoccupied.

Wilkinson states[a] that the tombs "were the property of the priests, and a sufficient number being always kept ready, the purchase was made at the shortest notice, nothing being requisite to complete even the sculptures or inscriptions but the insertion of the deceased's name, and a few statements respecting his family and profession." I do not find that Wilkinson qualified this general statement in any way. If it be true in all cases, a man cannot have selected a site and have had a tomb made and adorned especially for himself.

There are, however, in many tombs wall-subjects which seem to relate distinctly to the owner and to differ from the subjects in adjoining tombs; they are in fact so entirely unlike such decoration as we might expect to find it if ready made, that it is hard to accept Sir G. Wilkinson's statement without reserve; on the other hand whatever he says deserves the greatest consideration and respect.

The latest writer on the subject, Dr. Budge, does not make the matter much clearer. In his recently published book, *The Mummy*,[b] he tells us, on page 157, that Ani, the scribe, began to hew out a tomb for himself many years before his death. At page 315, however, he states that "the size and beauty of a tomb and its furniture depended, as much as the making of the mummy, upon the means at the disposal of the relatives of a deceased person." These statements do not agree. At page 326, he seems again to contradict himself, saying, "It is tolerably certain that these scenes are not fictitious, and that they were painted while the person who hoped to occupy the tomb was still alive and could direct the labours of the artist." He does not at all support the views of Wilkinson, but he still leaves us in doubt whether a man made a tomb for himself or whether his representatives made it for him.

It would be presumption on my part to put forth any definite opinion on the matter, but, judging by the evidence of the tombs themselves which I have seen, I shall take leave to suppose that in many cases the tomb was excavated and adorned either by a man for himself or by his representatives for him, and that the "ready-made article" was not so common as Wilkinson would lead us to think.

Where a necropolis is of high antiquity, and has been long in use, the rock-cut tombs (and it is of such only that I am speaking) are often crowded together one above the other in an extraordinary manner. One tomb is cut below or above another, or the tombs are placed side by side in so close proximity that the rock left between one chamber and another is not more than from 4 to 5 inches thick.

[a] Wilkinson, *Manners and Customs of the Ancient Egyptians*, iii. 433.

[b] E. A. Wallis Budge, *The Mummy*. Cambridge University Press. 1893.

We can only wonder that the face of the hill, thus riddled and honeycombed, has not fallen in, as in some cases no doubt it has. The robbers of tombs have broken their way through these thin partitions, and it is often possible to pass through four or five tombs in succession, entering by the door of one and coming out by the door of another.

From what has been said, it will be evident that the great man had not always a good choice of sites for his tomb. It was essential that he should have a bed of solid stone not less than 12 or 14 feet thick, free from horizontal faults, and free, if possible, from vertical fissures. A few cracks and fissures did not matter in the mummy-pit, where the surface was not to be sculptured or adorned.

The position having been selected and the size of the work decided upon, the workmen were now called in to make the first excavation for the tomb-chamber or chambers and for the mummy-pit. This was done by "rough hewers." It was the business of these men to make in the hill side a chamber of the required shape and measurement. The dimensions and instructions given must have been pretty exact, even at this early stage of the work, or stone would not have been left for details so thin as the front walls often were. The marks on the rock walls show that a chisel somewhat less than half-an-inch wide in the blade was very commonly used. The marks of this are often 2 inches or more apart, showing that labour was economised, the largest possible pieces of stone being flaked off at each point of attack. In the result the rough hewer often went too far, and we can see that the masons and sculptors who followed him and finished the work have often been placed in difficulties to get over defects of his making.

The section of the chamber, whether it should have a flat or arched ceiling, is one which it cannot always have been easy to decide at first. When cut in the deepest bed and best part of the rock it is not likely that the rough hewers would meet with a horizontal fault of so serious a nature as to make them fear that the roof would not stand. The section of the chamber roof could be either arched or flat as preferred. Where, however, the bed of rock was thinner and was overlaid with a layer of laminated and unsound material, it is evident that the good stone must be reserved for the sculptured walls, and the roof must be made as it best could be.

In many cases we find that the fault, more or less horizontal, which separates the good bed from the bad has dictated the line of the roof. The hewers have worked up to this and have left it at the natural tilt of the stratum whatever it was, fearing to cut into it. In such a case the tomb-chamber will not have a perfectly flat ceiling, but one sloping a little to the right or left. We may therefore see very good walls with a very shabby roof, the plaster with which the natural irregularities of the roof were covered having all fallen away and perished.

In other cases the interior of the chamber looks more like that of a natural cave, with a roof more or less arched, than something cut by the hand of man. This is, however, to be accounted for by the fact that the rock split up so readily that it could only be trusted to stand in an arched form, and in getting it to this shape pieces larger than intended flaked away. These breaks were made good with plaster, and for a long time the arched roof, with its plaster painted, would have looked as good as if it had been cut in the hardest stone. The lapse of some thousands of years has, however, not only caused the plaster to fall but large pieces of stone with it, shaken, no doubt, by the rough hewers in their work. Hence the cave-like appearance of some of the arched tombs.

When the rough hewers had finished their work they were followed by the men whose business it was to prepare the walls for the sculptors or painters, or both. These men I have called the masons. They made use of a tool much smaller than that used by the rough hewers, and went over all the surfaces of the good stone, leaving tool marks quite near together. It is, however, to be observed that the masons were by no means so exact as they might or should have been in getting the faces of the stone vertical or the horizontal lines of floors and ceilings true. Even in very highly-finished chambers the wall surfaces bulge in such a way as to prove that the masons were very careless.

One important office the masons had to fulfil, and that was the mending of faulty places. However good the stratum of stone may have been, it was seldom without some fissures or holes, or perhaps nodules of hard stuff, too hard for the sculptor to deal with. The large holes and fissures were made good by letting very neatly into the rock pieces of good stone. Small holes and cracks were stopped with hard plaster.

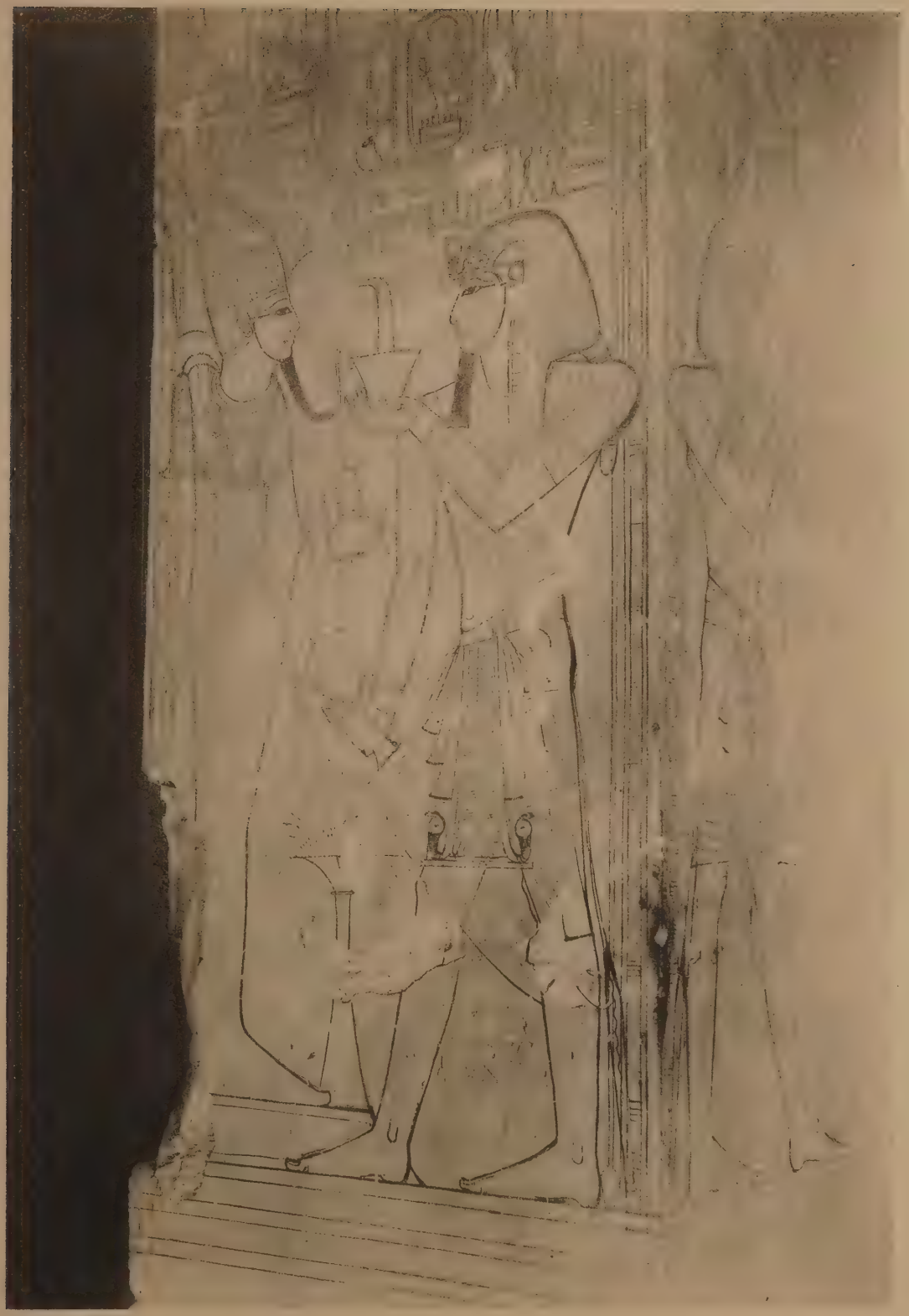
When these mendings and preparations had been done, the walls of the tomb-chamber presented an appearance fairly even, but covered all over with a corduroy pattern of chisel marks, and with patches of stone here and there very neatly inserted with fine white plaster. Small spots of plaster indicate the position of small faults in the walls, too small to mend with stone. So much for the walls. The roof now claims our attention. When cut in somewhat poor rock, and patched with plaster, it cannot at this stage have looked very attractive. It has already been said that the stone was apt to flake, pieces coming away in the working considerably behind the line of the intended face. In such cases the faults are not filled in with stone, but with plaster. The large pieces of plaster required seem generally to have been made of Nile mud and chopped straw, mixed perhaps with cowdung. This was subsequently covered with fine plaster, corresponding with that used for filling the small holes.

Following after the masons came the rubbers, those who rubbed down

the surfaces with a piece of stone, effacing to a considerable extent the tool-marks left by their predecessors. Judging by the result, we are led to suppose that it was not until these men came on the scene that any direct efforts were made to reduce the irregularities of the surfaces as left by the rough hewers. If we take a chamber hewn in the rock, the dimensions of which it was decided should be 12 feet wide throughout and 25 feet long, we shall find that, in fact, its width is irregular. At one end it is, perhaps, 12 feet wide, at the other 11½ feet. The right wall between these two extremities may not only advance or recede from a straight line drawn between the two ends, but it will in one place overhang its base a little, in another it will recede. The left wall will not be more exact. There can be little doubt that these defects are chiefly due to the want of proper control exercised over the rough hewers, who seemed to have hacked away with more vigour than care. The masons somewhat mended the matter, but through the marks of their chisels one can often see the deeper scars left by the rough hewers. Where the rough hewers had gone too far the masons feared to efface their marks, or the wall surface would have become too uneven. The rubbers, working more gently, have in many cases effaced the marks both of the rough hewers and of the masons on a bulging piece of wall; but they in their turn were afraid to go too far where the wall face was already concave. Their instructions evidently were to secure a fairly even rather than a perfectly smooth surface.

When the hewers, the masons, and the rubbers had completed their work, the appearance of the rock chamber is found to be somewhat improved, its wall surfaces being now sufficiently smooth for the decorators to ply their arts, whether sculptors or painters or both. Their first step was to lay a fine coat of white over the whole surface. When this was done the stone and plaster patches were no longer visible. On the coat of white, vertical and horizontal lines were set out with great care, in red. By means of these the walls were divided into squares or rectangles. On the same wall and immediately adjoining each other, the red lines varied very much in their distances apart. To give an instance, I have in one case and on the adjoining surfaces found the lines over a given surface to be 2 inches apart; over another 1½ inch; and elsewhere $\frac{9}{16}$ of an inch apart.

The difference of arrangement of these lines seems to be dictated by the scale of the figures or inscriptions which were to be drawn over them. Where inscriptions were to come the squares are smaller than where the design was to include figures. It was not a very difficult matter to set out a quantity of vertical and horizontal lines with considerable accuracy upon a fairly even wall surface; but it is not a little astonishing to see how exactly the lines are set out crossing the hollow curve of an arched roof. One is at a loss to understand why the masons'



FIGURES ON A PIER IN THE TOMB OF SETI I. AT THEBES.

work should be performed so carelessly, whilst the craftsmen who followed after worked with so much accuracy. The red lines thus set out were intended as a guide to the figure draughtsman and to the draughtsman of the hieroglyphs and the roof decorations. The outline and often very much detail of everything that was afterwards to appear on the walls was drawn over the red lines by subordinates and corrected by the master.

It would be to go over well-trodden ground were I to say much on this point, all books upon Egyptian art treat of it, but I cannot dismiss the subject without expressing admiration for the admirable skill of the draughtsmen. Their work varies in quality, but the bold firm line carried often at one sweep down the whole front of a figure cannot be too highly praised. The result is full of freedom, always, of course, within the conventional lines by which the art was ruled. Although the faces are without expression, not only are the figures well poised on the feet, but there is a sense of movement and elasticity which it might have been thought the restrictions imposed on the draughtsman would have made it impossible to suggest.

The photographs here reproduced are from the interior of the tomb of Seti I. at Thebes. The standing figures (Plate II.) are drawn upon a square pier carrying the roof; the other (Plate III.) is drawn on the wall. In Plate II. the photograph does not show the red lines crossing each other, but we can clearly see how the figure draughtsman did his work after the subordinate had drawn the merely decorative pattern at the angle of the pier. The shoulders and several other parts of the figures are drawn quite over the decorator's work, and the draughtsman was evidently impatient of being crippled by the exact space in which he was to have worked. We can also see in the feet, the arms, and several places the two lines, first of the pupil or subordinate who drew in the figure, and secondly of the master who with a firm hand and sure line corrected the work and left it ready for the sculptors. In Plate III. the same system of correcting the first draughtsman can be traced, more especially in the feet of the figures at the top of the photograph.

The work of the draughtsman in outline being finished, the carvers and sculptors come upon the scene. I use these two words with intention, as an examination of many wall surfaces shows very clearly that as far as possible the merely mechanical work was done by men with little skill. The final work was done by men who may with justice be called sculptors, and these often of no mean order.

In Egypt, as in other countries, however conventionalised art might be, the skill of craftsmen varied. Not only are there differences of skill at different periods, but at the same time and in the same place it is easy to trace the hand

of the second or third rate man as distinguished from that of a man of high ability. At Sakkâra the tombs of Ptah-hotep and of Ti are the same in style, but wonderfully beautiful as is the sculpture in the tomb of Ti, it is distinctly inferior to that in the tomb of Ptah-hotep.[a]

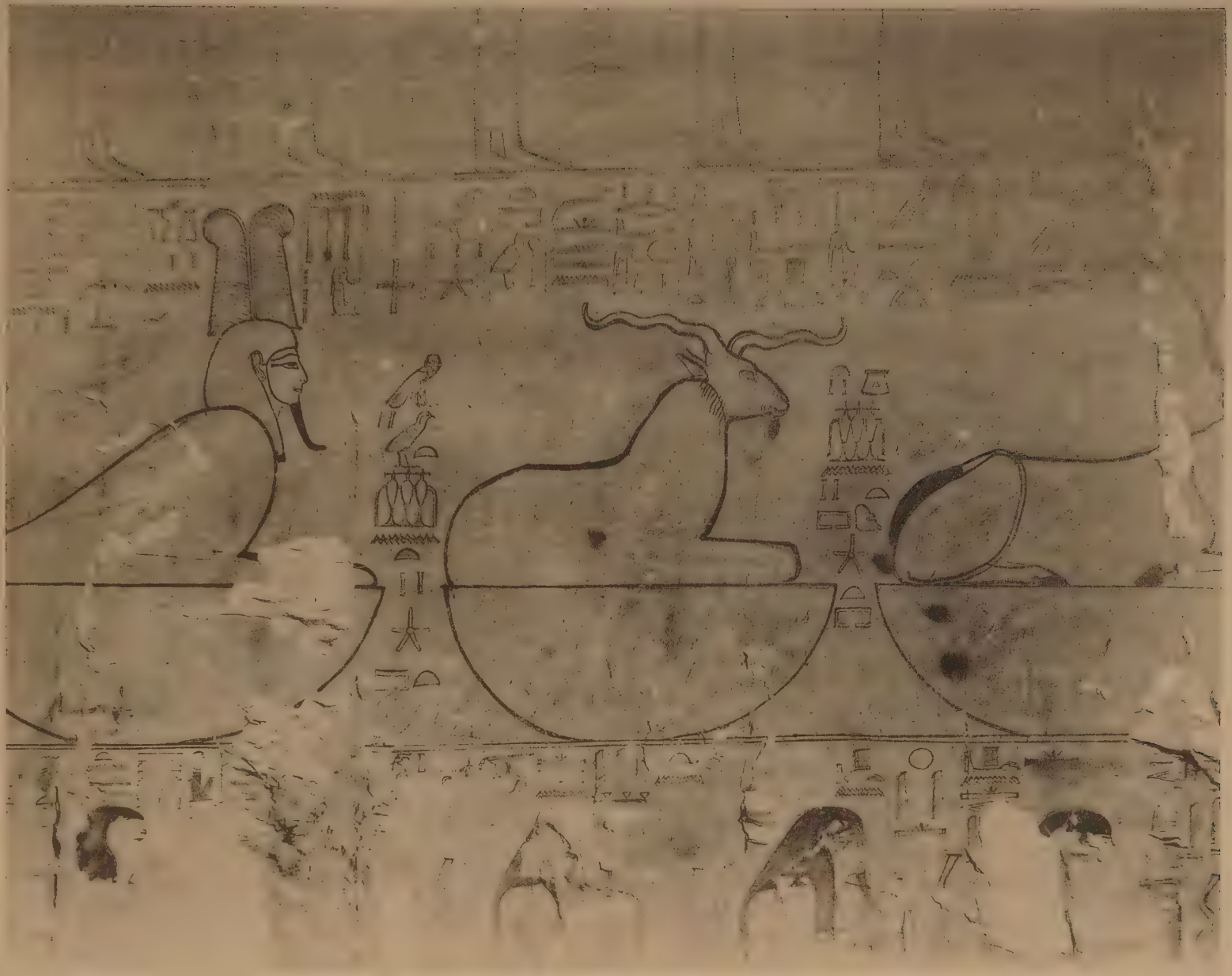
Wall sculptures are in two kinds, low-relief and sub-relief. The earliest Egyptian wall sculptures that we know of are, almost without exception, in low-relief, standing forward from the back-ground not more than $\frac{1}{8}$ to $\frac{3}{16}$ of an inch.

Sub-relief is the name I propose to give that kind of sculpture which is by some called Egyptian relief, by others relief "en creux," by Wilkinson "intaglio rilievato." The highest point of this species of relief does not project beyond the general plane of the wall surface, to which surface it is, in fact, subordinate. Some short name was required to designate it, and I have to thank Professor Mahaffy for assisting me to evolve this one. Numerous examples of sculpture in sub-relief may be found before the time of Rameses II., but in his time sub-relief became universal.

On the square pillars in a room of the mastaba of Mera, recently found by Mr. De Morgan at Sakkâra, the sculptures are in sub-relief, and this mastaba is assigned to the period of the sixth dynasty. On the columns of Ptolemaic temples, buildings in which the sculptures are almost always in relief, the sculpture on the piers and columns is in sub-relief, showing how, when once established, a custom remains unchanged for vast numbers of years. While sculptures on the walls of a given temple are in relief, those on columns are in sub-relief, the intention being, no doubt, not to break the outline of the pier or column by the irregular projection of the sculptures.

With works of the Ptolemaic and later periods I am not now concerned. Egypt had by that time ceased to be purely Egyptian. External influences were getting strong. When the sculptures were to be executed in low-relief, it is obvious that a great deal of the work connected with the removal of the intermediate surfaces, so that the figures should stand forth from the background, would not demand great skill of hand. While a sculptor would be needed to deal with the delicate modelling of the figures, a skilful apprentice could cut the first outline, and a less skilled hand could remove the surrounding material. In the tomb of Mera before referred to, the progress of the work done in this way

[a] The objection may be raised that in referring to these tombs I am travelling outside my subject. They are not rock tombs but mastabas. This is true, and as a further objection it may be said that the sculpture within these mastabas is upon masonry, but as a matter of fact the methods of work are the same whether upon masonry or upon the stone face gained in the solid rock. The sculpture in the rock tomb, the temple, or the mastaba has all its essentials in common.



FIGURES ON A WALL IN THE TOMB OF SETI I. AT THEBES.

can be seen. Here we find the figure drawn in red outline on the stone. A groove of a V section has been cut all round it, leaving the figure standing in the

midst, a white silhouette. In my sketch section I have very much exaggerated the depth of the groove, which does not, in fact, exceed $\frac{3}{16}$th of an inch.

In some parts of this mastaba the outlines of the figures are merely scratched on the wall. First the sketch in red, and then the scratch following its outline. In other places the painted outline of the figure remains, and the ground has been cut away all round up to this outline, the figures perfectly flat standing forward in low-relief, and with a clumsy edge.

It is to be noticed that the draftsman's work is usually finished carefully in every detail, an unnecessary labour, one would think, as every piece of his work would ultimately be cut away by the sculptor.

The next step is for the sculptor, working within the lines thus established, to finish the figure. This is done in many cases with extraordinary delicacy. The modelling of the limbs, especially of the knee joints, is quite remarkable. The figures being finished, the removal of the intermediate plane surfaces was undertaken by the workman in the third degree, and so the work was complete. Whether the sculpture was executed in fine white limestone or in sandstone, there seems to have been the same effort used at a good period of art to finish work of the first quality in the very best way. Whether it be in the Temple of Seti I. at Abydos, cut in the most beautiful limestone with a surface like ivory, in the Temple of Thothmes III. at Amada, or of the same king at Wadi Halfa, the last two being in Nubian sandstone (not a very satisfactory material), the same amount of care is used. In tombs there is a greater variety of workmanship. Some are finished in a manner very superior to others.

When the figures were to be worked in sub-relief, it is evident that all the work of removing the intermediate surfaces had not to be undertaken. As soon therefore as the draftsman had finished, the sculptor at once began his work, and his particular care was to avoid cutting into the vertical side of the sinking within which the relief was sunk. It will be seen by the sketch that the section of his work was almost the opposite of that which has already been given. He had to make the groove by which the figure was distinguished from the ground, within and not outside the red line left by the draftsman, and had to be particularly

careful not to break the sharp edge of the sinking within which the figure lay. The skill with which this is done, in a hard material like granite, is most astonishing.

There are in many cases tombs left half finished, and from these we may learn

how the work was done. The method of work does not always seem to have been the same. We sometimes find the whole intermediate surface forming the background of the low-relief completely removed and the figure left in silhouette, as I have already stated. From this we may suppose that but one hand was employed to remove all the background.

One thing is quite certain. There was considerable sub-division of labour. The man who cut the figures was not the same who cut the hieroglyphs, for we see in many cases the figures completed and the hieroglyphs still sketched in red and uncut.

I think this sub-division extended to works on the largest scale. In the rock temple at Abu Simbel there is a difference between the face of the northern figure and the faces of the other two. There is a subtlety and power about the one face which the others lack. I think that the master-hand directed the work in the one case, and this had to be copied for the others. The same remark may be applied to the standing Osiride figures within this temple. The faces are very good, the figures themselves are clumsy and ill-proportioned.

Even when the sculptures and hieroglyphs had been finished, the work was far from complete. Everything had to be painted. The work of the sculptor was, in fact, a mere vehicle for that of the painter.

At this point a considerable difficulty presents itself, and that is, that in consequence of the reckless hacking of the rough hewers there are still left innumerable chisel marks, and sometimes even big tool marks, on what should be perfectly smooth surfaces. It is not unusual to find that those surfaces of figures in low-relief which are most raised from the ground are still scored with tool marks. When the subjects are worked in sub-relief the tool marks can be traced, not only on the figures, but over the whole of the intermediate surfaces, the rubbers not having thoroughly effaced them. Proper care exercised when the work was begun would have prevented these troubles. It is not a little curious to observe how on one hand there is great carelessness, and on the other prodigal waste and repetition of labour in carrying to completion such a work as we have

under consideration. For want of this care the painter and decorator had often to work over the surface scored with tool marks. Their first step was to cover once more with white the whole of the surfaces. They made use of a fine white gesso, which overcame the absorbent quality of the stone. It is evident that there were different qualities of finish, according to the price agreed upon. In some cases the surface of the gesso is so fine and hard as to reflect light like the surface of an egg-shell; in others it is evident that a much more common material was used, somewhat thick and viscous, so much so that it very seriously interferes with the sharpness of the sculptor's outline. In all cases the delicacy of the sculptor's work was partly lost, and to recover the outline a tool, which must have been of the nature of a modelling tool, was often used, leaving a slightly indented line upon the gesso.

In many instances the sculptor has finished small details, such as feathers on a bird's wing, the ornaments of a necklace, etc. which the gesso almost effaces. These details have to be brought up again by the painter. This craftsman is often not very particular to follow exactly the lines made by the sculptor. In fact, the high finish left by the sculptor is almost, if not entirely, thrown away. In that excellent, but not very accurate, work, *A History of Art in Ancient Egypt*, by Perrot and Chipiez, a view of the painter's work is set forth which is, I think, very common but excessively false. It is said:[a] "When nothing interfered to prevent the completion of the work, the painter came with his palette and brushes to spread colour over the spaces enclosed by these lines." (Reference is made to the lines left by the draftsmen.) "Nothing could be easier than his task. He was only required to lay his colours smoothly and to avoid overpassing the boundaries laid down for him. The hues of the flesh and of the draperies were fixed in advance, as well as those of the various objects which were repeatedly introduced in such work."

The process described seems but one degree in advance of that required to adorn cheap prints, "a penny plain, twopence coloured." It is true that certain colours were set, as red for a man, yellow for a woman. To lay on these was the simple part of the work, but even in the colours of flesh there was room for complication. In the photographs from the tomb of Paheri at El Kab, shown in these rooms last November by our Fellow Mr. J. J. Tylor,[b] it could be seen that where two men stand together one will be a little darker in colour than the other; the same applies to animals. This was done in order that the front figure might be sufficiently relieved from that which stood immediately behind it and had

[a] Perrot and Chipiez, *A History of Art in Ancient Egypt*, ii. 332.

[b] *See* Plate IV., "Wall drawings and monuments of El Kab." *The Tomb of Paheri.* By J. J. Tylor and F. Ll. Griffith. 1895.

almost the same outline. The details were finished in the most elaborate way. As I have already said, the feathers, carefully and accurately rendered, are painted on a bird, the scales on a fish. The ears of corn are drawn in outline in red upon a field of golden yellow. Some ears are standing erect, others have been bent over, whilst again others are shown with their stems drawn together in the grasp of the reaper. The little teeth are drawn in his sickle, necklaces and ornaments are elaborated with the most careful minuteness. And then it is not true that the painter had merely to keep within the boundaries laid down for him. Perhaps he should have done so; as a matter of fact, he did not. An outline, in a fine, firm, and narrow red line, surrounds all yellow and white colours, and this was drawn by the painter on the gesso which had already effaced the lines of the first draftsman, and this same line very frequently differs a good deal from the outline left by the sculptor. Sometimes the work is pure freehand drawing, as where white lines are drawn across the limbs to indicate a drapery of semi-transparent muslin. Whether we examine temples or tombs we shall see that none of the arts made use of were carried to a higher degree of elaboration than that of the painter. The roof of a tomb was generally painted, and not carved.

We have now followed through the process of preparing a tomb-chamber from the beginning, from making a rough hole in the rock and getting it into better form by the masons to the highly minute and elaborate finishing by the painter, whose work should, perhaps, be more correctly described as illuminating. Very much more could be said on the subject of the sculpture and painting; the strange inaccuracies of the sculptors, the ease with which they might have made horizontal or vertical lines and yet did not, the skill with which they depicted figures in relief and the clumsiness of those carved in the round and seated at the tomb-end in a niche; and then of the painters, their mediums, varnishes, disregard of the lines left for their guidance by the sculptor, careful effacement of work already done by the sculptor and substitution of painting in its place, the way in which labour was done over and over again, as for example, a first outline by the draftsman effaced by the sculptor, then the sculptor's outline effaced by the thick gesso, and finally another outline drawn by the painter; all these points are worthy of close attention, but in regarding these details, the decorations of the temples, as well as of the tombs, must be taken together. How sufficient light was obtained to do very much of the work is to me a mystery. Very much could be done with reflectors, but in many cases the distances are too great from the source of light. I cannot think that lamps, simple wicks floating in oil, were enough. The temperature and the smoke would have made such working impossible.

No explanation that I have yet heard satisfies me. It remains as much a mystery as does the lifting of the great stones.

III.—*On the Roman town of Doclea, in Montenegro.* *By* J. A. R. Munro, *Esq.*, *M.A.*, *F.S.A.*; W. C. F. Anderson, *Esq.*, *M.A.*; J. G. Milne, *Esq.*, *M.A.*; *and* F. Haverfield, *Esq.*, *M.A.*, *F.S.A.*

Read June 14, 1894.

The following pages present the results of an expedition organised in the autumn of 1893 for the purpose of investigating the antiquities of the Roman town of Doclea, in Montenegro, the reputed birthplace of Diocletian. Excavations had already been carried on there during three seasons by H.H. the Prince of Montenegro, to whom the explorers desire to record their grateful acknowledgments, not only for his gracious permission to continue the work so auspiciously begun, but also for the kind reception and many facilities accorded to them. To M. Paul Rovinski also, the skilful director of the former excavations, they owe the warmest thanks. His generous co-operation and his local experience were simply invaluable, and his genial friendship can never be forgotten.

The account of the work is distributed as follows:

Part I. Doclea.
- § 1. The environs of Doclea.
- § 2. Topography of the town.
- § 3. The history of Doclea.

} By J. A. R. Munro.

Part II. Buildings recently excavated.
- § 1. The temples
- § 2. The large church.

} By W. C. F. Anderson.

- § 3. The small church. By J. G. Milne.

Part III. The inscriptions. By F. Haverfield and J. A. R. Munro.

PART I.

§ 1. The environs of Doclea.

At the innermost nook of the great plain that lies to the north of the Lake of Scutari two rivers emerge from the hills, the Morača flowing from the north-east, and the Zeta from the north-west. The rivers unite, and their joint stream, which keeps the name Morača, passes along the foot of the low bare ridge that bounds this corner of the plain on the west, down to the town of Podgorica about two miles below the junction, and so onwards to the distant lake. Between the two rivers, forming the base of a triangle to their apex, the naked limestone hills of the Piperi highlands rise abruptly from the flat. From them descends a torrent, dry in the summer time save during heavy rains, and after following on a smaller curve a course roughly parallel to the Morača, issues into the Zeta a few hundred yards above the confluence of the rivers.

The traveller from Podgorica towards Nikšić by the high road up the right bank of the Zeta can hardly fail to notice on the opposite side between the Morača and the mouth of the torrent a tract of rough level ground encumbered with heaps of stones and shimmering white ruins. It is the site of the Roman Doclea. The name survives in the modern Dukle, but there is not even a village to claim it, only a few scattered cottages on or about the site, and a large house and mill by the roadside. Should our traveller wish to visit the ancient town, he must proceed past it as far as the mill-house, and cross the fine new bridge over the Zeta. Turning back along the other bank, he will come first upon an ancient cemetery, which has been partially excavated. A group of little round stone urns, each with its circular lid, stands ranged on a large block like pots on a stove. Half a dozen epitaphs inscribed on small panelled stones may be found by searching, and a few paces further down the path lies a broken sarcophagus of the big-eared type so common at Salona. The path turns to the left away from the Zeta, and descends to a recently constructed bridge over the torrent-bed. The bridge is built almost entirely of ancient fragments, columns, bases, bits of cornice, and carved stones. Up the opposite slope a line of inscribed blocks, forming a parapet to the roadway, extends from the bridge to a gap in the town walls. These blocks and many of the fragments in the bridge were derived from the wreck of a great gate, which once occupied the gap. The gate itself seems to have been built of material collected from all quarters of the site, perhaps hastily put together to meet a barbarian invasion in the last days of Doclea.

The ancient town (see plan, Plate IV.) is of irregular shape, lying east and west, with a length very much greater than its breadth. The situation is a strong one, in spite of the level ground. The south side is defended by the Morača, the west by the Zeta, and the north by the gulley of the torrent. All three streams flow in deep rocky beds between overhanging walls of conglomerate strata. In very few places is the water accessible from above, and although the torrent is an uncertain defence, the rivers are broad, swift, and deep. There is only one ford, at a point on the Morača near the middle of the south side of the town, and it is quite impassable except when the river is low. The best proof of the natural strength of the river faces of the site is that there is no trace of fortification along them. The massive wall which covers the north and east sides ends at the one extremity on the Zeta, at the other on the Morača. The east face is the weakest, but it is also the shortest, and has been most carefully fortified. The wall here runs across to the cañon of the Morača from an elbow in the torrent's course, where, having spent the impetus of its descent from the hills, it turns westward to join the Zeta. Between these two points a broad ditch or moat has been dug outside the wall, completing the isolation of the peninsula.

Large portions of the walls are still standing, especially the east wall and eastern half of the north wall. They are solidly built of a thick rubble core with a facing of small square blocks laid in regular courses. At rare intervals are traces of projecting rectangular towers. Besides the west gate there must have been a gate near the north-east corner, but its existence has rather to be inferred from the roads inside and outside the walls than demonstrated by actual remains. There is, it is true, a gap in the north wall at the right place, but it is so ruinous and jagged that by itself it would prove nothing. From this gap a narrow but direct and unimpeded lane leads through the ruins of the ancient town down to the ford on the Morača. The lane may well represent an ancient street narrowed by the *débris* of the buildings on each side. Outside the walls a track runs eastwards between the roots of the hills and the river. It has quite the character of a Roman road, and is lined with fragments from sepulchral monuments. About half a mile out of Doclea in particular there is an old grave-yard just under the hill, where among innumerable ancient fragments of all kinds is a large collection of sarcophagus lids. But the best evidence is a Roman bridge on the Morača, about a mile above the ancient town. It was once a fine structure of six arches, and is still impressive although nothing is standing but the piers and abutments. The river is here hemmed by high rocks, and flows in one concentrated sweep under the right bank. The northernmost arch had a span of not less than fifty feet. This bridge must have been the main means of communication between

Doclea and the country to the south and east, and we cannot suppose that all the traffic was sent round to the west gate, even were it possible to carry a road along between the north wall of the town and the torrent. We are compelled therefore to regard the gap near the north-east corner as a second gate, although it cannot have been a very large one.

The bridge and gate have some bearing on the problem of the Roman road from Scodra to Narona. Mr. Arthur Evans has fully discussed the course of this road in his *Antiquarian Researches in Illyricum*.[a] I have not the necessary local knowledge to carry that discussion any farther. All that I know of the country is in favour of Mr. Evans' general hypothesis, and it may be added that the assignment of the Docleates to the *conventus* of Narona[b] seems to postulate some fairly direct communication. Only, on the one hand, I find it difficult to believe that, if there was already a Roman bridge over the Morača just above Doclea, the road crossed the river just below at Podgorica; and on the other hand, if the road crossed by that bridge and passed through the town, it becomes more than ever inexplicable that Doclea is not mentioned in the Itinerary and Tabula. Is it possible that the Roman road crossed the Morača several miles below Podgorica, and followed the valley of the Sitnica, so as to strike the Zeta at Spuž and cut off the bend by Dukle?

From Dukle up to Spuž the Zeta is closely hemmed by the hills, but at Spuž the valley opens out into the level plain of Bjelopavlic; a broad fertile flat, broken only by a row of rocky crests which rise at intervals in the middle. The old fortress of Spuž crowns the southernmost of these crests, and commands at once the passage of the river by the quaint narrow bridge at the base of the rock, and the defile towards Dukle. In the side of one of the crests above Spuž are the quarries which supplied Doclea with its best building stone.

The Morača valley is for the most part a mere rift in the mountains, too narrow even for a road. A hasty ride down the lower part of it failed to reveal any ancient traces.

In the great plain it is otherwise. Right across it, from the Ribnica about due east of Podgorica nearly up to Doclea, an attentive eye can follow the line of a subterranean aqueduct. The Ribnica, a tributary of the Morača, springs full grown from the mountain side. The aqueduct crossed it near its source on a bridge, of which the rubble core of the abutments on each bank is still standing. The water was drawn, M. Rovinski informed me, from the Cijevna, some distance beyond. The reason why the Roman engineers could not utilize the water of the

[a] Pt. ii. pp. 79 *sq.*

[b] Pliny, N. H. iii. 143.

Ribnica is plain enough. The bed of the stream lies below the level of the undulations of the plain. To get a flow of water, a source higher up the hillside had to be tapped, and this made it necessary to go beyond the Ribnica to the Cijevna. We had a section of the aqueduct cleared at a point in the plain where the vault had collapsed. It is an arched channel about $4\frac{1}{2}$ feet high by about $2\frac{1}{2}$ wide, built of rubble and lined with fine cement. The earth thrown out when the trench was cut still shows as a faint ripple on the surface of the ground. The popular story says that the aqueduct was carried over the Morača to Doclea on the Roman bridge above the town. It is doubtless this tradition which has led to the myth of "massive remains of an aqueduct"[a] at Doclea. But the story cannot be accepted; for firstly, the aqueduct does not make for the bridge, but rather for the ford; secondly, the Morača is itself an aqueduct for Doclea, and its water is highly esteemed by the natives; thirdly, were water wanted for Doclea, it could be brought by a shorter route and with less trouble from the Piperi hills on the same side of the river. The aqueduct does not reach so far as the Morača, and its destination must be sought on the south bank.

Opposite to the ancient town there is a small tumulus, and tombs are sometimes discovered. A low ridge in the ground, possibly an ancient road, runs from near the ford towards the hamlet of Zlatica at the foot of the eastern hills. Here there are remains of two churches, one standing in skeleton, the other beside it almost obliterated. Among the *débris* of the latter is some Roman brickwork, a couple of large slabs with ornamental carving, like those found in the Christian basilica at Doclea, and several inscriptions.[b]

Zlatica lies close under the mountains, at the foot of the steep pass that leads from the Podgorica plain directly into the eastern corner of Montenegro. The top of the pass is commanded by the ruined fortress of Medun. Whatever the date of the present castle, there was an Illyrian hill-fort here before the Roman conquest. Medun is Livy's *Medeon*,[c] where the family of King Gentius surrendered to the legate Perperna. On a lower ridge under the castled crag are some remains of a large fortified enclosure of polygonal masonry. Similar walls exist, I believe, at Scutari, Alessio, and elsewhere, samples of which are figured in Hahn's *Albanesische Studien*, p. 122. I bought from a villager of Medun, who

[a] Quoted by Mr. Evans from Kovalevski, *Antiquarian Researches*, p. 85, note.

[b] Mr. Milne did a day's experimental digging on this site after the close of our work at Doclea. He reports that there are about 2 yards of earth above the floor. Probably the church could be cleared for £50, and several more inscriptions recovered. The materials seem to have been brought from Doclea, which is only an hour's walk distant.

[c] Livy, xliv. 23, 32. Polybius, xxix. 2.

had found them in his field, two copper coins of Scodra, which Professor Gardner has deciphered as follows:

(1)[a] Obv. Head of Zeus. Rev. ΔPI . Galley: below it, dolphin.
(2)[b] Obv. Head of Zeus. Rev. ΑΛΛ | ΣΚΟΔΡΕΙ | ΝΩΝ. Galley?

§ 2. Topography of the town.

The internal topography of Doclea will be best described if we start from the west gate and follow the broad grassy way which runs eastwards from this point until it meets the cross lane from the north-east gate at right angles. The broad way has been cleared and levelled by M. Rovinski during his three seasons of work on the site, but there can be little doubt that it fairly represents the course of the main street of the town. Along it extends on each side a line of important buildings.

Of the gate itself little now remains. To the left, as one enters, there is a strong wall, built, not of rubble with a facing of small stones, but of large squared blocks. On the right, between the roadway and a flanking tower, are scanty remains of a thick wall, which seems to have been chiefly composed of fragments of worked stones loosely put together with a little mortar. Two or three large blocks projecting at the roadside indicate the position of the gate. We did a little digging on both sides in the hope of finding some more inscriptions, but only unearthed one fragment.

A few paces inside the gate stands a low isolated block of concrete, which from its shape and size may have been the base of an equestrian statue. Hard by, but probably not *in situ*, lie some carved cornice blocks from a large building. A little farther in to the south is the groundwork of a small temple (A on plan, plate IV), probably a temple of Roma, and beside it stands one of its gleaming white columns, a conspicuous object from all parts of the site. East of the temple follows a complex of chambers more or less closely connected with one another, which can scarcely be anything but a magnificent private dwelling (B on plan). The area covered is a large one. Near the centre is a small ornamental garden, round which the rooms of the house are ranged on three sides. The other half of the space is occupied by an open court, or pleasure ground, at one

[a] Cf. Brit. Mus. Catalogue, Thessaly, Pl. xxxi. 14.
[b] Compare *Numismatic Chronicle*, 1880, Pl. xiii. 2.

end of which is the foundation of a grotto or fountain. Still east of this palatial residence is a second small temple (C on plan) of which there are sufficient remains to afford material for a fairly complete restoration. Interesting fragments are the bust of Diana, sculptured in high relief on the east pediment, and the pair of large flat dolphins which formed the balustrade on each side of the front steps.

Beyond this temple on the same side of the street lies an extensive group of connected buildings, in which we may recognise the public baths of the town (E on plan). There are not only hot and cold rooms, a plunge bath, and other conveniences for which one would now look in vain throughout the land, but gymnasia, open courts, covered walks, and suites of chambers, large and small; in fact, a complete palace of luxury. Opposite to the baths, on the north side of the way, is a large quadrangle fenced from the street by a simple wall, in the middle of which is the main entrance. The west side of the enclosure is occupied by the most important building in Doclea, the great civil basilica (D on plan). The north and east sides are formed by rows of shops opening on to the central square. In the centre of the north side facing the gateway in the south wall is a raised podium with a mosaic floor, perhaps an exedra. There can be little doubt that this square represents the forum of the ancient town, but it must be noted that the rows of shops along the north and east sides are, at least as we now see them, of very late date. The shops are in fact largely constructed of fragments from the ruins of the basilica, and it is not difficult to identify pieces of the cornice and architrave converted into door-posts and thresholds. The basilica is better preserved than might have been expected, and there are ample materials for a complete reconstruction. We understand that Dr. Jelić, who devoted a fortnight to the study of the building, will shortly publish a full account of it with detailed plans and drawings.[a] Here, therefore, the briefest notice will suffice. The building lies north and south, with its apse to the north. The principal front faces eastwards to the forum. It was adorned with a fine colonnade constructed entirely of the beautiful white Spuž stone. None of the columns are now left, but a number of large fluted fragments, some standing in front of the palace of Krušna Glavica, near Podgorica, others built into the bridge over the torrent, may be confidently referred to this basilica. The pilaster bases are still *in situ*, engaged in a back wall of excellent brickwork. The south end of the building looking on to the street is of the usual small blocks of local stone, with a moulded sill course of white stone for a row of windows about five feet from the

[a] See also M. A. Gérard in the *Revue archéologique*, 1890, pp. 434-7.

ground. The west and north walls are of similar plain construction. The apse is the only feature in the latter, and the former is broken only by two doors and a line of pilaster buttresses for the support of the roof. The street entrance is at the south-east corner in a line with the colonnade. Immediately to the left a door opens on to the narthex, and there were three more doors in the east wall The internal plan is interesting; the general form is basilican, but there seem to have been no aisles. We could see no stylobate for any columns but the two enormous pairs which divided the north and south ends from the main body of the nave. There may, however, have been arcades of engaged arches along the side walls. The northern end is a separate chamber, connected with the nave by a broad central doorway, and lighted by windows in the east wall. The excellent style and execution of the basilica, and the inscriptions on the architrave, alike point to an early date. It is natural to refer the building to the first years of the municipal existence of Doclea under the Flavian emperors.

Between the basilica and the west gate there is little to notice on the north side of the road. Faint traces of building, and a semicircular foundation about midway between the two, may suggest a long portico, but they may be deceptive, and nothing can be said to be certain without excavation. It is otherwise to the east of the Forum. Between the south-east corner of the quadrangle and the cross lane lies what may once have been a considerable building (E on plan). It seems to have had a portico front on the street, with many small chambers behind. A well-made cemented water-channel passes along the front, and at a short distance to the back is a ruinous platform with a bit of mosaic floor. The front part was laid bare by us, but the whole building proved to be in such poor preservation, that it did not seem worth while to complete the excavation.

Opposite to this portico, in the gap between the lane and the baths, there is a small grassy patch rising to a mound at its southern end. The mound was the site of another of our experiments which, had time permitted, might have been carried farther. It covered a curious group of short, thick, parallel walls, one set arranged north and south, another set at right angles to these, east and west. The walls are divided by deep, narrow passages. (G on plan.) Between them were found large pieces of a thick rubble and cement floor paved with flagstones, which must have overlain the whole basement. On the brink of the northern slope is a large corner fragment with remnants of marble lining still projecting from its edges. The fragment might suggest, what is quite possible, that the building is related to the neighbouring baths. A maize field which intervenes is said to have been paved with stone slabs, dug out and removed within living memory.

A little to the south, between the mound and the Morača, stands an isolated building in the middle of a field. It was here that we began our operations. Before it was excavated the site looked promising enough, a well-defined heap of *débris* from which protruded three biggish columns, but the building proved to be more singular than interesting. Only the eastern half was excavated. It is an oblong divided into two nearly equal chambers with a door between them. (H on plan.) The walls are standing to a height of about three feet, except for one higher fragment in the west side. There is no entrance. Rude steps lead down into each room at its south-east corner. The columns are merely stumps set on end on the ground, perhaps to support a roof or floor.

The north-western quarter of the site presents few interesting features. It is comparatively clear and level ground, mapped out into patches of maize-field and pasture. There is also a stretch of fairly open ground on the south side of the main street along the bank of the Zeta; but for the most part the south-western region is one complicated tract of ruins, a wilderness of walls and heaps of stones, piled confusedly together and thickly overgrown with brambles. Large blocks are rare, and it is scarcely possible to trace the outlines of the buildings. The stones have been piled up into dykes and mounds to make room for scanty plots of cultivation or of hay. The most attractive site lies near the Morača, about midway between the ford and the confluence of the rivers. It is marked by a slight rise, some fragments of wall, and several large blocks of cornice, etc. For the rest one heap of stones looks about as good as another.

There remains the eastern part of the site beyond the cross lane. This quarter has a character between those of the two regions just described. It is neither so featureless as the north-west, nor so hopelessly encumbered as the south-west. The most prominent object is a high piece of ivy-covered wall, which shelters a cottage and little kitchen garden. A few yards to the west of this wall was a piece of rough hummocky ground, where lay a carved capital and several fragments of columns. M. Rovinski remembered the tradition of a mosaic pavement having been discovered hereabouts. We started digging, and laid bare the large Christian basilica. (K on plan.) My attention had been attracted by some large blocks peeping through a clump of undergrowth a little to the south of the church. As soon as men could be spared, we extended our operations to this site, and discovered the massively built little church. (I on plan.)

Although Doclea was an episcopal see, the Christian antiquities of the site were hitherto limited to the famous Podgorica vase, a glass vessel engraved with scenes from the Bible and highly interesting explanatory inscriptions in the local

dialect of Latin. We can now point to two early churches, the larger of which must surely have been the cathedral church of the bishopric.

The rest of the eastern half of the site has never been touched by excavation, and calls for no special notice.

A few remarks may be made on the character of the site in general. The type of construction is very constant, and varies little in the earliest and the latest buildings. The civil basilica, a great public building of the prosperous Flavian period, is naturally better built than the Christian basilica of about the sixth century. The masonry of the city walls is more regular and better laid than the courses of a private house. But the materials and methods are the same throughout. The walls are built of small, roughly squared blocks of the local limestone, laid in courses with mortar. They were no doubt plastered in most cases, or covered with fine stucco and decorated with colour. The stone is a good hard material, and may be had for the lifting close up to the gates of the town. Brickwork is rare. There are some excellent pieces in the east wall of the civil basilica, and brick is used for arching the stoke-holes of the furnaces in the baths and elsewhere. But evidently stone was cheaper and more popular. There are a few slight remnants of thin marble facing, especially in the temple of Diana and in the plunge bath. Marble must have been a costly material, which had to be brought from a distance. For decorative purposes, such as the east front of the basilica, carved work, inscribed bases, and the like, and for thresholds, door-posts, lintels, paving, and steps, the favourite material was a very fine white limestone, derived from the quarries beyond Spuž. This is a magnificent building stone, which withstands the weather well, and tones to a rich golden hue. In general effect it resembles a finer kind of travertine, but has a more compact crystalline structure, coming very near to marble in the best specimens. If many of the inscriptions of Doclea are hard to read, it is not by fault of the material, but because they have been purposely defaced. The roofs were of tiles, a layer of which is always to be found between the wreck of the outer walls and the floor.

From the archaeologist's point of view Doclea has two great drawbacks. In the first place the town has been ruthlessly rebuilt. Probably some destructive catastrophe befell it a century or two before its end. Few of the buildings have escaped a more or less complete reconstruction. Those which, like the great basilica, were too solidly constructed to be destroyed, and too expensive to be restored, served as quarries to the impoverished inhabitants. The small church and the later erections in the forum were built largely out of the materials of the

basilica. Inscribed bases were freely used for building. They must have formed a large proportion of the stones of the western gateway, and occur sporadically in other buildings, probably far removed from their original position. Everywhere doors have been opened or blocked up, and walls have been patched or pulled about. The reconstruction of the forum is especially to be regretted, but we may be thankful that the basilica and temples were not seriously tampered with. It is, I think, much more likely that the destruction of the public buildings was wrought by earthquake than by a barbarian raid, and the great earthquake of A.D. 518 offers an extremely probable occasion. The site is to the present day exploited by the population of the neighbourhood for large stones. The block on which were recorded the honours held by M. Flavius Fronto in the chief cities of southern Dalmatia, the most important inscription hitherto discovered at Doclea, has disappeared. I myself found a pious person carving a cross for a tombstone out of one of the blocks from the temple of Roma. The eastern cemetery is full of architectural pieces from the site, and I have no doubt that many more would be discovered in the ruins of the large church at Zlatica.

Secondly, beyond the "fixtures" of the ancient town, buildings and inscriptions, antiquities are scarcely to be found. Sculpture is represented only by the busts of Diana and Roma carved in high relief on the tympana of their temples, and by one small fragment. One terracotta figure, now in the possession of His Highness the Prince, was discovered in the baths. Copper coins are plentiful, engraved gems are sometimes picked up by the peasants in the maize fields, and a certain number of small objects of bronze, iron, lead, bone, etc. turn up in the diggings. The pottery and glass are fragmentary and of no interest. The famous Podgorica vase must have come out of a tomb. We found nothing which calls for any special notice. It would seem that the inhabitants must have fled before the invaders and taken most of their property with them. At all events the barbarians and later scratchers have picked the bones of Doclea very clean.

Against these drawbacks must be set certain advantages. The site is not deeply buried and is practically uninhabited. Excavation is consequently easy and rapid. The walls of the houses are often visible on the surface, and there is no great accumulation of earth above the floors. The buildings, although mostly cut off at a height of from 3 to 6 feet from the ground, are unusually complete, and remain much as they were left. The site therefore, so far as it has been cleared, presents a picture to which it would not be easy to find a parallel of the ground work of a provincial town in the time of Justinian.

This picture then is the first claim of Doclea to our interest. A second is the

information to be derived from the numerous inscriptions as to the history of the Roman province, the condition of the country, and the great Diocletian myth. A third claim is the addition made by the two churches to our knowledge of the Christian antiquities, and the light thrown by the traditions of the see of Doclea on the ecclesiastical history, of Southern Dalmatia.

§ 3. The history of Doclea.

Doclea was in ancient times the urban centre of an Illyrian tribe, the Docleates. They first appear in history among the peoples reduced by Augustus in his Illyrian War in B.C. 35, and compelled to pay arrears of tribute.[a] It is probable that they came under the Roman power in B.C. 168, after the war with Gentius, and that the tribute was that half of the old royal tribute, which the Romans continued to exact.[b]

The Docleates, Pliny tells us,[c] were one of the tribes who resorted to the *conventus* of Narona. They were divided into thirty-three *decuriae*. The nature of these *decuriae* is obscure. They appear to be a division common to all the Illyrian tribes, but their number varies enormously. The Delmatae, for example, have 342 *decuriae*, and the Mazaei 269, whereas the Duersi have only 17, and the Deretini 14. We may infer from an inscription of Salonae[d] that the *decuriae* had a regular organisation, and each a common chest or treasury. Mr. W. W. Fowler[e] conjectures that they may have been an artificial expedient invented by the Roman Government to meet the necessities of a backward people. I am rather inclined to believe that they represent a native gentile division adopted by the Romans for administrative purposes, in default of a better. The number of *decuriae* seems casual and unsymmetrical, and is not, so far as one can see, proportionate to the strength and importance of the tribes. Moreover, all analogies from their methods in similar cases would lead us to suppose that the Romans adapted an existing institution rather than inaugurated a new system. Probably the old Illyrian organisation was not unlike the present Slavonic one in the same region. The Docleates would be analagous to the Kuči or the Vasojevici, the *decuriae* to some such smaller unit as the modern *plemen*.

Doclea probably grew up gradually. The site is equally well adapted for traffic and for defence, and would naturally become at once the refuge and the market of the district. The position of the town is strong, and yet the ground is

[a] *Appian, Illyr.* 16. [b] *Livy*, xlv. 26.
[c] *Nat. Hist.* iii. 143. [d] C. I. L. iii. 2107. [e] *Classical Review*, viii. 11.

perfectly level and easy. Here the shepherds of the hills could conveniently meet the tillers of the plain, and exchange their stock and dairy produce for grain and fruit, just as they do now at Podgorica. The evidence of the coins seems to show that there was little external trade. Mr. Milne informs me that almost all the coins of the lower empire are of the Siscia mint. But the Docleate cheese was famous, even at Rome.[a]

Doclea is first mentioned in literature by Ptolemy,[b] among the inland cities of Dalmatia, but the inscriptions prove that the town received municipal rights half a century earlier. The tribe Quirina, and the prevalence of the name Flavius in the earliest no less than the latest inscriptions (about one in three of the persons mentioned is a Flavius or Flavia), indicate, as M. Cagnat[c] has already pointed out, that the town acquired its privileges from one of the Flavian emperors. It is, I think, possible to go a step farther in defining the date. No less than six of the inscriptions of Doclea refer to one M. Flavius Fronto and his family. These inscriptions are the most pretentious hitherto discovered on the site. From their style and lettering they cannot be dated later than the end of the first century or early years of the second. Three of them are engraved on the architrave of the basilica in the forum, the most important building in Doclea. Two were discovered in the pavement of the same building, inscribed on slabs which may have formed the front face of a statue-base. The sixth was on a large block, probably a base, which has disappeared from the site. The family was evidently the most influential in Doclea, and the great basilica seems to have been little else than a monument to its glory. We gather the following facts from the inscriptions. Marcus Flavius Fronto was the son of Titus Flavius. He had a long list of distinctions: he was *sacerdos* in the colonies of Narona and Epidaurus, *duovir jure dicundo* of Julium Risinium, *duovir quinquennalis* and *pontifex* in the colony of Scodra, *duovir jure dicundo quinquennalis*, *pontifex*, and *flamen* of a deceased emperor[d] in Doclea, and a *praefectus* of some sort, possibly *praefectus fabrum*. His wife's name was Flavia Tertulla. Their son, Marcus Flavius Balbinus, died at the age of fifteen. The *ordo Docleatium* decreed him a public funeral, all the municipal *honores*, and an equestrian statue, which his parents had gilded at their own expense.

Now it is probable that Titus Flavius, the father of Flavius Fronto, assumed

[a] Pliny, *Nat. Hist.* xi. 240. [b] *Geogr.* ii. 16, 7.

[c] *Comptes-rendus de l' Académie des inscriptions*, 1890. *Mémoires de la Société Nationale des Antiquaires de France*, 1893.

[d] Probably Titus, see Part III. note on No. 26.

his imperial Roman name at the time when Doclea acquired its privileges, and he was enrolled in the *tribus Quirina*. Similarly the name Flavia Tertulla is directly borrowed from the imperial family. The grandmother of Vespasian and the first wife of Titus both bore the name Tertulla. But if the parents of Flavius Fronto and Flavia Tertulla had already adopted Roman names, we should expect the enfranchisement of Doclea to fall in the earlier years of the Flavian dynasty, in the reign of Vespasian rather than of Domitian. This inference is confirmed by the earliest dateable inscription of Doclea, which records a dedication *Divo Tito*, by one Lucius Flavius Epidianus, *quattuorvir jure dicundo quinquennalis, ob honorem*. Doclea, therefore, received its rights before the death of Titus. If we could argue from the silence of Pliny that it had not received them at the time of the publication of the Natural History, the date would be narrowed down to the four years 77 to 81 B.C. But it is not safe to assume that Pliny's information was brought up to date, especially in reference to Dalmatia.

The promotion of Doclea marks, as M. Cagnat points out, a stage in the progress of Roman civilisation in Illyria. The coast towns owed their privileges to Julius, Augustus, or Claudius. Vespasian withdrew the legions from the province, and it is natural to find that Doclea and Scodra, which lie in the first great valley parallel to the coast, received the one municipal rights, the other the dignity of a colony, at about the same time. The remoter inland towns, such as the municipium of Splonum (?), did not attain to Roman organisation until the time of Hadrian and the Antonines.

In the institutions of Doclea the only interesting feature is the occurrence of both *quattuorviri* and *duoviri*. L. Flavius Epidianus is *quattuorvir jure dicundo quinquennalis*. M. Flavius Fronto is *duovir jure dicundo quinquennalis*, and one T. Flavius Verecundus Thamarianus, on another inscription of about the same date, is *duovir jure dicundo*. There is no hint that Doclea became a colony. On the contrary, the official designation of the community is always simply *respublica Docleatium*. It is not very rare to find both titles, even in towns which never rose above municipal rank. Marquardt quotes a number of cases from Italy, and it would not be difficult to collect a long list from the provinces. Possibly the *quattuorvirate* did not last long at Doclea. Possibly, as in Spain at about the same date, the change to *duoviri* was coincident with the bestowal of Latin rights. In any case, the tendency towards uniformity of organisation would tell in favour of the change. Although *quattuorviri* are found at the colonies Aequum, Narona, and Salonae, there is no parallel to their existence in a Dalmatian municipium. As M. Cagnat observes, *duoviri* are there the universal rule.

But although Doclea never attained to the dignity of a Roman colony, the town has a probable title to another distinction no less illustrious. An inscription found in the large church (No. 64) records a dedication by one of the decurions who was *sacerdos ad aram Caesaris*. Nowhere else in Dalmatia proper has any mention of an *ara Caesaris* yet been discovered. Liburnia had its own altar and priesthood of Augustus at Scardona.[a] These facts, taken together with the large number of dedications to emperors among the inscriptions, make it extremely probable that, as Dr. Hirschfeld has suggested, Doclea was the seat of the imperial worship for southern Dalmatia.

It is as the reputed birthplace of the emperor Diocletian that Doclea claims some small share in historical interest. What little we know of the history of the town may be appropriately grouped round that central point. It is universally admitted that Diocletian was a Dalmatian, but we should naturally infer from the language of most of our authorities, and from the fact that he retired thither on laying down his power, that he was born near Salonae. His supposed connection with Doclea rests upon a statement in the Epitome of Aurelius Victor (xxxix.) that Diocletian was "*matre pariter atque oppido nomine Dioclea*" and until he became emperor was called Diocles, but then changed his name to the Roman model. The story sounds improbable in itself. The name Diocletianus suggests adoption or emancipation, and one is tempted to suspect that some confusion, in which the word *metropolis* played its part, may underlie the "*matre pariter atque oppido*." It is a far cry from Doclea to Diocletianus, and Gibbon's rhetoric does not render the derivation any more plausible. "The town," he says, "seems to have been properly called Doclia, ... and the original name of the fortunate slave was probably Docles: he first lengthened it to the Grecian harmony of Diocles, and at length to the Roman majesty of Diocletianus." Here it will be observed that the change from Docles to Diocles blunts the point of the story, that Doclea gives the adjective Docleas not Docles, and that the poor mother Dioclea is entirely ignored! But there is a more specious line of argument than Gibbon's. It is incontestable that to the medieval writers from Constantine Porphyrogenitus[b] onwards, Doclea has become Dioclea. An exact parallel to the change may be found in Phrygia,[c] where a town, Dokela, which still keeps its name as Doghla or Dola, had become Graecised into Dioclea,

[a] C. I. L. III. 2810.

[b] *De admin. imp.* cc. 29, 30, 35.

[c] Ramsay, "Cities and Bishoprics of Phrygia," *Journal of Hellenic Studies*, iv. 422-3.

and issued coins so inscribed, in the third century. Farlati[a] produces a bishop of Dioclea in the province of Praevalitana, that is to say a bishop of Doclea, who signs at the Council of Chalcedon in the year 451. And Aurelius Victor carries us back to the middle of the fourth century.[b] May not Doclea, like Dokela, have become Dioclea in the third century?

None of these arguments will stand scrutiny. Let us work back over them.

(1) There is positive evidence that Doclea had not become Dioclea before Diocletian. Not a single inscription ever gives any other form than Doclea, and it so happens that the evidence is most abundant just at the time we want it. The *respublica Docleatium* dedicates inscribed bases in the third century to Severus Alexander, between the years 226 and 235, to the Philippi and Otacilia Severa, A.D. 244, to Gallus, A.D. 252, to Volusianus, A.D. 253, to Valerian, A.D. 254, and to Gallienus, between the years 257 and 270. Of these inscriptions one falls in the year preceding Diocletian's birth, and four others within the next fifteen years. No form but *Docleates* appears on any of them. Clearly Diocletian cannot have got his name from Doclea without a free use of the "Grecian harmony."

(2) Whatever be the date of Aurelius Victor, nothing can be said of the Epitome except that it is later than the accession of Arcadius and Honorius, and that the compiler supplements the "De Caesaribus" from other sources. The passage about the birthplace of Diocletian is a supplement. The first mention of Dioclea that can be dated is in Constantine Porphyrogenitus. On the other hand Doclea is still implied in two letters from Gregory the Great in the year 602 to the bishops of Justiniana Prima and of Scodra about the misconduct of Paulus, bishop of the *Civitas Docleatina*.[c]

(3) Gregory's letters raise a presumption against Farlati's bishop of Dioclea in 451. In spite of the marginal note "Praevalitana" in the Venetian Codex of the Acts of the Council of Chalcedon, I believe that Dioclea in Phrygia is meant. In the first place very few western bishops attended the Council, and it would be strange if the distant Dalmatian town were represented, and the neighbouring Phrygian bishop absent. Secondly, the bishop bears the thoroughly Greek name of Εὔανδρος. Thirdly he signs among a number of other Phrygian bishops.

(4) The analogy of the change of name in the Phrygian town is misleading.

[a] *Illyricum Sacrum*, vol. vii.

[b] *Cf.* Evans, *Antiquarian Researches*, 84, note b.

[c] *See* Mansi, *Concil.* x. 329-30.

It is natural enough that Dokela should be Graecised into Dioclea in Phrygia. It is not so natural that Doclea should become Dioclea in the Latin Dalmatia. The extent of the Greek culture of Doclea may be estimated by the fact that out of about seventy inscriptions only one, an insignificant tombstone, is in Greek, and by the epitaph set up by Q. Flavius Helenus over his incomparable friend Gordius Maximianus, "*artis gramaticae Graecae peritissimus*," in which Helenus, in spite of his Greek name and the learned instruction of his friend, spells "*gramaticae*" with only one *m*.

There is thus no evidence or probability in favour of the name Dioclea before the tenth century. Constantine Porphyrogenitus, writing in the year 949, is the first dateable authority for the form. But at the same time he tells us that the town no longer existed. To Constantine Dioclea means a district inland of Cattaro and Antivari, in which there is a "waste chester" (ἐρημόκαστρον) founded long ago by Diocletian, whence the district derives its name and the inhabitants are called Diocletiani. Here we have got round to the opposite version. Instead of Diocletian being derived from Dioclea, Dioclea is derived from Diocletian. Instead of being the scion of the town, the emperor has become its parent. The one version has probably no more foundation than the other, both rest simply on a confusion of similar names. The intermediate step would be the rise of the form of Dioclea when Doclea was no longer alive to resist it; and Constantine's version, however absurd in fact, has a certain logical superiority over its rival, for it was, no doubt, mainly the contaminating influence of the name Diocletian that produced the form Dioclea. In stubborn protest against both alike the old Doclea remains to the present day Dukle, and the inhabitants of its "ager" call themselves Dukljani.

But we have not yet quite done with the Diocletian myth. If I read the Dalmatian historians aright, it had curious and far-reaching consequences in the middle ages. The confusion seems to me to have extended beyond names to places and facts. What really belonged to Spalato, the true birthplace and foundation of Diocletian, was transferred with the name Dioclea to Doclea. Thus it was that the archbishopric of Salonae or Spalato was confronted with a shadowy double of itself at Doclea, which plays an important part in the ecclesiastical squabbles of the time. It is in vain that the Spalatines profess themselves the one and only metropolitans of Dalmatia; they are always rebutted by the spectral archbishopric of Dioclea. The mythical rights of Dioclea are claimed on the one part by the church of Antivari, on the other by that of Ragusa. Antivari, as the capital of the district, arrogates to herself the title of the *civitas Diocletana*, her

church becomes the *ecclesia Diocletana*, and she pretends, as may be read in the pages of the anonymous Presbyter,[a] to be actually the old Doclea or Dioclea, rebuilt and re-established as the metropolis of southern Dalmatia by King Suetopelek at the fabulous synod of Delma on the conversion of the Slavs! To the writers of the twelfth and subsequent centuries, such as the Presbyter and John Cinnamus,[b] Dioclea is no longer, as it was to Constantine, a homeless name of a ruined site, but has found a local habitation, not at Doclea, but at the living city of Antivari. There is some evidence that Antivari attained to ecclesiastical independence and archiepiscopal rank soon after the middle of the eleventh century.[c] It was doubtless then that the claim received final sanction and authority. But there is no sound evidence that Doclea was ever an archbishopric. The archbishopric is that of Spalato transplanted by the confusion of names to Doclea, and thence on to Antivari. Similarly the Presbyter maintains that the kings of Dalmatia were crowned, not in the cathedral church of St. Mary at Spalato, but at the unimportant church of St. Mary outside the walls of Antivari.

After the revival of learning this new Dioclea caused a contrary confusion. Ludovicus Tubero for instance, narrating how the sailors of Antivari rendered a service to the Ragusans in their wars with the Slavs, makes them sail out from the lake of Scutari, which he calls the *lacus Lygnistris*, by the river Bojana, which he identifies with the Drilo.[d]

The claim of Antivari to the ghostly rights of Dioclea was not undisputed. The Spalatine Archdeacon Thomas has a much less romantic version of the origin of the archbishopric.[e] According to his account it was instituted simply to save the southern bishops the risks of the voyage to Spalato. The Ragusans contested the pretensions of both Antivari and Spalato. They claimed that on the destruction of Dioclea the archbishop fled to Ragusa and carried all his rights with him. This version is to be explained, I think, by the statement of Constantine, that when Salonae fell into the hands of the barbarians, many of the inhabitants, among them apparently the most eminent ecclesiastics, took refuge at Ragusa. Probably the so-called archbishop of Dioclea was really the metropolitan of Salonae, and the old confusion lies at the root of the story.

The theory here suggested seems to me to furnish some sort of rational explanation of the statements of the later Dalmatian writers. It would also help

[a] The Presbyter of Dioclea, *Regnum Slavorum*, printed in Lucius, *De regno Dalmatiae et Croatiae*, 1666.

[b] V. 17.

[c] *See* Farlati, *Illyricum Sacrum*, vii. 17.

[d] *De Temp. suis.* bk. v. p. 109.

[e] *Hist. Salon.* c. xv.

us to understand how Constantine makes Diocletian the founder of Doclea, and the Epitomist, who puts his birth at Doclea, yet lets him spend his last years at Spalato *in propriis agris*. It is even possible that the Epitomist means by Dioclea nothing else than Spalato. I have already noticed that his *matre pariter atque oppido nomine Dioclea* suggests some misunderstanding of the word μητρόπολις. Thomas the Archdeacon has a curious story which points in the same direction. He tells us that Diocletian assigned the temple of Jupiter, afterwards the cathedral church of St. Mary in Spalato, to his mother to live in, and made the whole province subject to her. We are reminded at once of the mother Dioclea and of the supreme mother-church of Dalmatia.

It is not easy to fix the date of the destruction of Doclea. The letters of Gregory already mentioned show that so late as the year 602 there was still a bishop of the *civitas Docleatina*, and the ecclesiastical organisation of the province was unimpaired. In 639, however, the land was occupied by the pagan Slavs, the Roman population was driven to the coast towns, and the interior was lost to the Church. It is scarcely credible that Doclea can have escaped the fate that overwhelmed her neighbours. There is nothing on the site that need be as late as the seventh century, and we hear no more of Doclea until Constantine mentions it as an ἐρημόκαστρον three hundred years afterwards. The Presbyter's story of its restoration at the time of the conversion of the Slavs, a quite uncertain date, has no authority. It is merely intended to justify the claims of Antivari. The year 639 may therefore be taken as a downward limit. But it may be doubted whether the town existed so long. The coins stop abruptly at Honorius, a fact which plainly points to the devastating march of Alaric at the beginning of the fifth century. Yet the small church, with the inscription of Ausonia which pertains to it, can hardly be earlier than the time of Justinian, and the wholesale rebuilding, of which so many traces remain, seems to imply a restoration. Moreover, it appears more probable that the great civil basilica, which furnished so much of the materials for reconstruction, was ruined by an earthquake such as we know to have visited the region in the year 518, than by a barbarian raid. On the whole I am inclined to believe that Doclea was destroyed by Alaric, but revived to some extent, and maintained a precarious existence down to the year 639. The restoration may probably be ascribed to the revival of prosperity under Justinian, and Gregory's *civitas Docleatina* is more than a mere survival of an ecclesiastical title.

NOTE.

LIST OF COINS FROM DOCLEA, INCLUDING THE COLLECTION IN THE CETINJE MUSEUM.

Greek	3	Maximian	3
Tiberius	1	Maximinus	1
Claudius pierced	1	Constantine	14
Titus	1	Roma	5
Domitian	1	Constantinopolis	2
Trajan	3	Helena	1
Hadrian	3	Fausta	1
Antoninus	4	Licinius	2
Faustina	2	Crispus	2
Commodus	1	Constantine Cæsar	5
Indecipherable, of the period of Antonines.	8	Delmatius	1
Geta	1	Constantius	7
Alexander	3	Constans	5
Gordianus III.	1	Indecipherable, of the Constantinian family.	61
Philip	1	Julian	1
Gallienus	15	Jovian	1
Quintillus	1	Theodosius	11
Claudius Gothicus	10	Gratian	2
Aurelian	5	Valentinian	4
Severina	1	Honorius	1
Probus	3	Indecipherable, of the Theodosian family	15
Carinus	1		224
Numerian	1	Totally defaced	77
Indecipherable, of the latter part of the third century	4		301
Diocletian	2		

All the above I have examined. I hear that there is a gold coin of Honorius in the possession of His Highness the Prince.

J. G. MILNE.

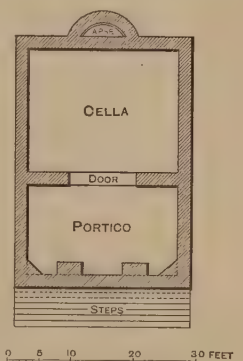
PART II.

§ 1.—The Temples.

The ruins of two temples are the most easily identified buildings on the site. The podium of each stands almost entire, stripped of its coating of slabs of Spuž stone, and surrounded by fragments of capitals, columns, and cornices discovered during the Montenegrin excavations. From these fragments a fairly complete reconstruction is possible.

In the centre of the pediment of each temple was a bust in relief, in the more easterly of Diana, in the western of Minerva or Roma. The latter has been removed to the terrace of the new palace near Podgorica. Both temples are of the Roman Ionic order, and prostyle tetrastyle with an apse. They are almost identical in plan, structure, and size, the proportions of the *cella* being the chief difference; the temple of Diana having a *cella* 30 by 25 Roman feet, while that of Minerva is 30 by 30 feet.

Taking the temple of Diana first, as the remains are somewhat more varied, there are four rows of steps still *in situ*, each with a height of three Roman *palmi* (22 centimetres). Near these steps lie the fragments of two stone dolphins. They formed a balustrade on each side of the steps, as is shown by a series of steps, like the teeth of a saw, in their lower edge, which correspond exactly with the temple steps.



Plan of temple of Diana at Doclea.

Of the temple front, the foundations, with the piers for the four columns, still remain in the podium. A base of one of the columns, part of one of the shafts, and fragments of several capitals, lie scattered at the sides. The base is 49 centimetres in diameter, the column 39 at the top, showing that the columns tapered slightly.

Fragments of the entablature show that it was identical with that of the temple of Minerva. It was surmounted by a band of floral pattern as a frieze. The cornice above the architrave had a plain moulding, whereas the pediment had a cornice with *cymatium* ornamented with a band of palmettes, consoles alternating with rosettes, an egg and dart band, and a leaf pattern. In the centre of the pediment was a bust of Diana carved in relief. The slab which bears it lies in front of the temple steps.

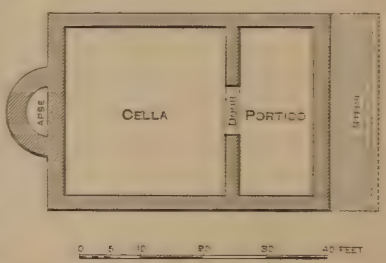
There is nothing to show the character of the inside of the portico. A wide doorway, from which the side posts have been removed, leads into the *cella*. The

floor of the *cella* is of stamped brick, but a vast number of small fragments shows that it was originally covered with slabs of marble and Spuž stone. The walls were also incrusted with marble, red, green, and blue-grey, and there are fragments of a moulded cornice.

The apse seems to be part of the original structure, not a later addition. Neither in it nor elsewhere are there any traces of a cult statue or its base.

The podium wall is of coarse local stone, built in courses of irregular depth. It is two Roman feet (59 centimetres) thick throughout. The floor of the *cella* stood 4 feet above the outside level, the space between the walls being filled up to that height with broken concrete.

The temple of Roma or Minerva is still surrounded by a course of squared blocks of Spuž stone (26 centimetres thick), firmly clamped together with iron. These blocks served as a foundation for the slabs which coated it (9 thick). The walls (3 Roman feet) are thicker than those in the temple of Diana. The steps are of identically the same size (22 high with 26 tread). There are, however, no traces of dolphins having been on the balustrades, which seem to have been formed of plain slabs. Owing, no doubt, to the greater thickness of the walls, there are no piers for the columns in the front wall of the podium. The diameter of the top of a column which has been placed upright near the temple is 515 millimetres, considerably larger than the columns of the temple of Diana. There is a large slab almost uninjured from the architrave, with the entablature and floral frieze mentioned above. Two of the corner pieces and several fragments of the cornice show that it had a plain moulding. The *cella* threshold has been removed, but the bed in which it was laid and part of both side posts are *in situ*. The door was 1·72 metres, almost 6 feet, wide.



Plan of the temple of Minerva, Doclea.

A torso of a figure, considerably less than life size, clad in a *toga* and bearing a cornucopiæ in his left hand, was found near the temple. It is the only piece of sculpture in the round, except a small fragment of a foot, discovered on the site.

On the terrace at the new palace near Podgorica is the central slab of the pediment, with the head of Minerva or Roma in relief, now much defaced. If the *togatus* is the genius of an emperor, or a deified emperor, and belongs to the temple, we may regard it as dedicated to Roma.

§ 2. The Large Church.

Mounds of stone overgrown with thorn marked the site of the larger church. The neighbouring farmers had cleared away most of the smaller walls around to make room for maize plots, and had piled the stones on the ruins of the main building.

After excavation the walls of the church were found standing intact some 3 to 5 feet above the central pavement. They are of rough local stone, built in the same careless fashion as those on the rest of the site.

The church is oriented nearly south-east and north-west, but for convenience we shall speak of it as though it were due east and west.

The plan is basilican, and only differs from the type represented by St. Clement's at Rome in having the court or *atrium* on the south instead of the west side.

The nave is 80 Roman feet long by 30 wide; the apse 22 feet wide, 15 deep, with a semi-circle 11 feet in radius, the chord being set back 4 feet from the line of the east wall; the aisles are 10 feet wide and open at the east end into two small chambers (the *prothesis* and *diaconicum*); the porch or *narthex* is not symmetrical, the south side, where the main entrance is, being 7 feet longer than the north.

The floor of the apse, the *bema*, is raised some 8 inches above that of the nave. Seats 20 inches wide run round it, with the foundations of a bishop's throne in the centre. The seats have been stripped of their covering slabs and only the rough stone remains. The throne seems to have been at least twice as high as the seats and to have had three steps. Like the rest of the church the *bema* was paved with mosaic, fragments of which remain at the foot of the throne (showing its original breadth) and below the seats on the north side.

Unfortunately there is nothing to show how the apse was separated from the nave, as the edge of the *bema* is broken away. A solitary base of small size at the south angle of the apse may possibly have served as part of the foundation for a screen. That there was a screen seems to be proved by the variety of slabs and uprights found through the church, which as we shall see below belong to three if not four different structures. Of the altar there are no traces, though the fact that the semi-circle of the apse is set back 4 feet from the wall suggests that it stood, as one would expect, in front of the bishop's throne.

In the nave there is a platform about 19 feet wide by 15 feet deep set in front of the *bema*.

This *solea*, to use a convenient term, stands some 2 inches above the floor,

Plan of a Large Church at Doclea.

and from the roughness of its edges may be assumed to have been enclosed by a screen.

On the *solea* there are no traces of an *ambo*, nor of seats. Like the rest of the church it was paved with mosaic, fragments of which still remain.

The aisles were separated from the nave by a row of columns on each side. Six bases, four on the north, two on the south side, remain *in situ*. Between these bases are heavy blocks, some 6 inches thick, placed on the floor between, giving the appearance of a *stylobate*. There were seven columns on each side, placed about 9 feet apart, the intervals between those *in situ* varying several inches from each other.

The intervals between the three central bases on each side must obviously have been larger than those remaining, as there is not sufficient room for two in the central gap on the north side. The bases differ in size from $17\frac{1}{2}$ to $19\frac{1}{2}$ inches and also in style. There are many fragments of the columns, and among these, two are so little injured that their length can be determined approximately. The best preserved lies as it fell, near the base at the east end of the north aisle. It is 9 feet $3\frac{1}{2}$ inches long and cannot have been more than a few inches longer originally. Like the bases, the columns vary in size, *e.g.* the diameter of the top, in three cases, is $13\frac{1}{3}$, 14, and $14\frac{1}{3}$ inches.

The rubbish which filled the floor of the aisles was largely broken clay tiles, presumably from the roof. The column in the north aisle, mentioned above, lay on a stratum of tiles, showing that the roof had fallen in before it was overthrown. There are no signs of either brick or stone arches in the rubbish, nor were any blocks of a size sufficient to span the space between the columns found, so that one may conclude that the roof was supported on timber.

A number of capitals were found scattered over the church. Two of these were of the Romano-Corinthian order, and apparently identical with the capitals from the Pagan Basilica which now stand on the terrace of the new palace near Podgorica. Another is Romano-Ionic. Some are of a very debased Ionic type, of a rude Byzantine style. One of them has a cross inserted between the volutes. Others are square truncated pyramids of the rudimentary "impost" type, described by Messrs. Lethaby and Swainson.[a]

The pavement was of mosaic throughout the nave, that in the south aisle remaining almost intact.

In the west corner of the south aisle a number of large blocks lay scattered. These are gravestones of a late Roman type, one of them has the cippus of Ursus, with sculptured ornament and inscription, the others with rosette and central

[a] *S. Sophia*, p. 251, fig. 53.

flower ornaments. All have been cut down, the parallelogram of the original stone being made almost square, and all were found with the ornamental face downwards. Some of them lay on the mosaic pavement without any rubbish between, the mosaic beneath being absolutely fresh. One is inclined to suppose that they fell from the wall above, or were part of some structure standing near the blocked entrances in the south wall which was overthrown before the rest of the church.

Many gravestone slabs of the same type, a parallelogram panel, with a circular rosette, flower, or diamond ornament in the centre, are to be seen in the old Turkish cemetery outside the city wall, and near the ruined church at Zlatica.

A central door, the threshold of which still remains, though the sideposts are missing, leads from the nave to the narthex. A small door in the south aisle also communicates with it.

The central doorway, as it now stands, is 14 feet 7 inches wide, and the original door if placed symmetrically in the centre, was probably 10 feet wide, allowance being made for the side posts.

The main entrance to the church is in the south wall of the narthex. Its threshold 21 inches wide, 8 feet 5 inches long, and two blocks forming the sidepost of one side still remain. The grooves in the threshold, in which the folding doors slid, show that it was originally 6 feet 6 inches wide. The threshold is similar to many in the pagan buildings of the town, and was no doubt taken from one of them.

Behind the west wall of the narthex are three chambers which have no doors connecting them with any building. A rude stair of three steps leads to the central one, and is obviously of later date than the main building; as also the chambers themselves seem to be. Owing to the mass of stones we were unable to excavate the west front, but judging from the inside, it seems to have been a plain blank wall.

Of the various fragments found scattered throughout the church, the crosses, the ornamented slabs, and the uprights which supported them, the smaller columns and capitals, and the remains of at least three window gratings are all that deserve special mention.

The crosses are roughly cut in local stone, and though all of the same form differ slightly in size. Two are complete. One measures 2 feet by 18 inches.

The several fragments of the broken crosses were found so widely scattered that it would seem that they were purposely destroyed.

The slabs belong to four different sets, distinguished from one another by ornament, thickness, and quality of stone.

The most notable is a fragmentary marble slab with a central six-armed cross surrounded by a circle formed of five cords, with two other interlacing cords above, which spread as tendrils on either side of the cross, and end in ivy leaves. The back of the slab is ornamented with a plain cross, showing that it was intended to be seen from both sides. Its likeness to the slabs in the screen of St. Clement's, Rome, suggests that it was part of the screen of the *solea*.

There are fragments of at least three of these slabs. They were 2 feet $11\frac{1}{4}$ inches high, and probably nearly 6 feet wide, so that two of them with an entrance space between would, as at St. Clement's, fit the front of the *solea* (18 feet).

Several of the marble uprights which supported the screen were found. They are 2 feet $11\frac{1}{2}$ inches high, and the slabs fit exactly into the slots at the side. Their only ornament is a longitudinal countersunk panel on front and back.

The remains of the other three sets of slabs are too fragmentary to admit of any certain restoration. One set ornamented with ivy leaves is thicker than those mentioned above. Uprights with slots of the same thickness were found.

Others have ivy tendrils, a cross inside a circle of rope, and a diaper pattern with crosses in alternate lozenges. Another small fragment has a flower and leaf ornament in vertical panels.

A small column, the same height as the uprights, and several fragments of similar columns obviously belong to one of the screens, possibly the screen of the *bema*, in front of the altar.

Some fragments of columns of the same size, but with spiral fluting, may have belonged to the altar itself.

A solitary column, which is uninjured, and 7 feet 3 inches high, may possibly have been part of a *ciborium*, but as there are no traces of its base or the foundations of the altar this is very doubtful.

Some small capitals, with debased volute surmounted by a truncated pyramid, which is ornamented with a cross, seem to have belonged to something of the kind.

A window grating 4 feet $8\frac{1}{2}$ inches by 2 feet $10\frac{1}{2}$ inches, 5 inches thick, with a diagonal lattice of six bars each way, was found in widely scattered fragments. Fragments of a similar window, and part of a scale-pattern grating (the latter found near the main entrance) also turned up.

It is not difficult to find many analogies at Ravenna and elsewhere for the different floral ornaments, but there seems to be no clue in any of them to suggest

an exact date for the structure, nor is there any marked characteristic in them to show that they are due to western rather than eastern influence. Uprights, capitals, and ornaments of the same style are to be seen built into the walls of mosques in Bithynia.

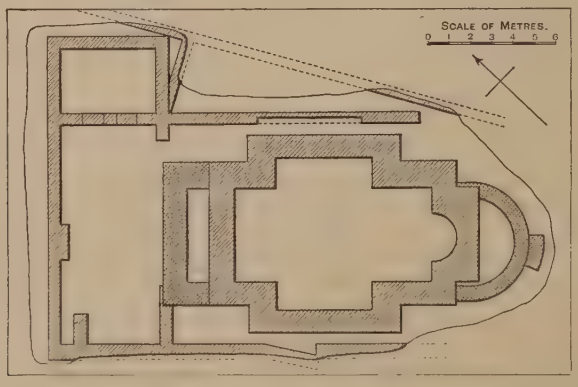
So that for the date one must turn rather to the small church, with its dedicatory inscription, and to the general history of the site as recorded by Mr. Munro.

§ 3. The Small Church.

The small church, as it has been called for want of a better name, lies to the west of the basilica, separated from it and its buildings by a narrow road. Whatever the particular ecclesiastical function of this church may have been, its plan and position seem to separate it from the basilica, and so it may conveniently be treated by itself.

The existing remains are little more than foundations. These, however, are complete, and enable the ground plan of the church and its immediate surroundings to be traced without much doubt.

The original building was in the shape of a Greek cross, with a small apse,



Plan of a Small Church at Doclea.

the extreme internal measurements being: length, 9·4 metres, exclusive of the apse, and 10·5 metres inclusive; breadth, 7·35 metres. It was lengthened by a porch at the west end; the foundation walls of which were carried 3·35 metres further forward. A new and larger external apse was subsequently built unsym-

metrically on to the east end, its centre being ·4 metres south of the main axis of the church. On the north and south the building is enclosed by boundary walls, ·55 metres away from the foundations, and these are carried on at the west end to form a court, 10·7 by 5 metres. To the north of this court lies a second smaller enclosure, 5· by 3·3 metres, which abuts at its north-east angle on the boundary of the road.

The walls of the main building are solidly constructed, 1 to 1·2 metres in thickness, of blocks of limestone, with a core of rough cement. The workmen utilized largely in the foundations the remains of earlier buildings, particularly the great civil basilica; fragments from the architrave and cornice of which are numerous. The north wall is the only one where anything remains which was originally visible above ground. Here the facing is of well-laid limestone blocks, above which comes a second course constructed out of the door and window mouldings of the civil basilica, as shown in the annexed sketch, and used as a base course.

Of the interior nothing is left above the floor level.

Window moulding.
Civil Basilica.

Base-course.
Small Church.

The porch at the west end appears to have been part of the original building. There is a break in the lower foundation course, but the character of the construction and materials used are the same as in the main body of the building.

The external apse at the east end shows a distinct difference. Not only is it unsymmetrically added, but the foundation walls are built of small rough stones, with none of the fragments of earlier buildings found elsewhere in the church, and are laid, without any attempt at joints, in a rough mortar much inferior to that of the other work.

The court in front is surrounded by roughly-built walls which show traces of having been plastered with a fine cement, and is floored with the same material.

The only entrance is in the middle of the front wall, where two steps are preserved, leading down into the court. In the north wall the threshold of the entrance into the second court remains, with a column-base in the middle. This court is similar to the first in respect of walls and floor.

The materials for the restoration of the building are practically none, beyond the foundations. Several small columns were found in the court with a number of capitals and a dedicatory inscription (No. 28). These probably had their place in the west porch.

The approach to the church from the court must have been up a flight of steps. The internal lining of the walls has been removed, but the cement backing shows the level at which the stones began to be laid in regular courses, and it would seem that the floor was not less than 1·2 metres above the level of the court. The flooring of the court ends at a line ·6 metres in front of the existing foundations, and the remains of mortar adhering to these foundations show that there was a course of stones laid against them ·2 metres in height. The church was therefore probably entered by a flight of six steps of ·2 metres.

The court must have been open; there are no traces of any kind to show that it was anything more than an enclosure surrounded by low walls. The smaller enclosure, however, may have been roofed, this is suggested by the column-base on the threshold with which is probably to be connected a broken column found close by, originally about 2 metres in height.

The date of the church can only be roughly conjectured. It must be earlier than 639, and the fragments from the civil basilica built into it may give an anterior date, if, as seems likely, the basilica was overthrown by the earthquake of 518. Between these two dates the building of the church may be placed nearer to the later than the earlier limit.

PART III.

Inscriptions.

The following pages contain all the Roman inscriptions and the solitary Greek inscription found at Dukle and placed on record. The reader is thus provided with a conspectus of the somewhat scanty epigraphic material yielded by the site, which seemed worth giving, because that material is nowhere, not even in the *Corpus*, to be found in one collected whole. A few inscriptions from the neighbourhood of Berane, in the valley of the Lim, have also been incorporated.

The inscriptions have been found at various dates. Three only (Nos. 16, 40, and 42) were known when Mommsen published the third volume of the *Corpus Inscriptionum Latinarum* in 1873; the rest have been added since by the researches of Mr. Rovinski and by the visits of foreign scholars whose names are mentioned below, where their results are quoted. The excavations recorded in the preceding pages added twenty-three more or less perfect inscriptions, besides correcting the readings of previous investigators in some important points.

In the following list the inscriptions are arranged in the same order, speaking generally, as they would be in the *Corpus*. After the dedications to gods (1—3) follow those to emperors (4—18), the inscriptions of the basilica and statues erected in honour of Flavius Balbinus (19—24) and some similar stones, the tombstones (29—62), and some miscellaneous inscriptions and fragments of less certain character, one of which (No. 64) is of some value. The readings are those of Mr. Munro's copies, unless otherwise stated. The present editors have added some expansions and brief explanations. Where, as in Nos. 52, 53, 64, and elsewhere, these are borrowed from other scholars, acknowledgment is made; the remainder are either obviously common property or original. The numbers of the inscriptions in the third volume of the *Corpus* are quoted throughout; the numbers from 13626 onwards are taken from proof sheets which Professor Hirschfeld has very kindly sent to us. Where more than one reference is given, the inscription has been treated more than once in the *Corpus*.

1. Dukle: copied by Saski. [C. I. L. 8283.]

DIS DE
ABVSQ

2. Dukle: built side upwards into the north abutment of the Roman bridge on the Morača about a mile above the ancient town. Block of hard limestone, 2 feet 2 inches high, 1 foot $3\frac{1}{4}$ inches broad, with letters about 2 inches. [C. I. L. 12679.]

I · O · M	J(ovi) O(ptimo) M(aximo),
EPONE · REGIN	Epon(a)e regin(ae),
GENIO · LOCI	Genio loci,
P · BENNIVS · EC	P. Bennius E[g]-
REGIVS · MIL ·	regius, mil(es)
COH · VOL · ADIV	coh(ortis) Vol(untariorum), adju(tor)
RINC · BF · COS · V · S	[p]rinc(ipis), b(ene)f(iciarius) co(n)s(ularis), v(otum) s(olvit).

Adiutores principis are mentioned in C. I. L. VIII 4332 and Ephem. v. 709, but in both these cases the men served in legions. They appear to have been under-officers attached to the centurions, who were *principes*, and performing much the same clerkly duties as the *librarii*.

3. Dukle: near the junction of the Zeta and Morača. Panelled block of Spuž stone, 2 feet 6 inches high, 1 foot 11 inches broad, 1 foot 10 inches thick. Letters, $2\frac{1}{4}$ inches and $1\frac{1}{2}$ inch. Split in two and lacking the upper right-hand corner. Surface much weathered; Mr. Munro observes that the stone seems to have been shot at from across the Zeta. When copied before in 1875 and 1882, the inscription was perfect, except for the *i* of *Veneri*. [C. I. L. 8284.]

Veneri
Aug(ustae)
S[a]crum.
F[l](avia) Bassilla.

4—18. These inscriptions are all or almost all dedications to Emperors. It is possible, as Hirschfeld has suggested, that we should connect them with the mention of a *sacerdos ad aram Caesaris* below (No. 64), and should suppose that a centre of Caesar worship for southern Dalmatia was at Doclea itself.

4. Dukle: from the west gate, now in the parapet of the bridge. Panelled block of Spuž stone, 2 feet $9\frac{1}{4}$ inches high, 2 feet $1\frac{3}{4}$ inches broad, 2 feet 1 inch thick. Right lower corner cut away. Letters in first two lines, 3 inches, the rest, $1\frac{5}{8}$ inches. The inscription has been purposely defaced, and is hard to read.

Sticotti read practically nothing in the first line; in line 5 Borman read Q I I D on a squeeze sent by Sticotti. [C. I. L. 12680.]

DIVOTITO	Divo Tito
AVG·	Aug(usto)
LFLAVIVSQVIR	L. Flavius Quir(ina)
EPIDIANVS	Epidianus
IIIIVIRIDQVIQ	IIIIvir j(ure) d(icundo) qui(n)q(uennalis)
	[*not inscribed.*]
⌀B·HON⌀	ob hon[orem].

The occurrence of a *quattuorvir iure dicundo quinquennalis* is notable. In general, we find *duoviri* in colonies, *quattuorviri in municipia*, but the rule is not universally kept, and in Dalmatian municipalities, as M. Cagnat has observed, *quattuorviri* hardly occur.

This is the earliest datable inscription from Doclea. It proves that the town received municipal rights before the death of Titus, and perhaps from him (see note on No. 26). From other evidence, it is probable that the town received its rights from one of the Flavian emperors, who did a great deal for the Romanisation of Dalmatia.

5. Podgorica, old town: block of Spuž stone, cut away on all sides, built into the door-post of a stable in the yard of a Turkish house. [C. I. L. 12681.]

imp. ca	ES	*ri*
divi ner	VA	*e f.*
nervae tr	IA	*no aug*
germ. p	NT	*max*
trib. p	O II	*cos ii*

Erected in honour of Trajan in the autumn of A.D. 98.

6. At the palace of Krušna Glavica, opposite Podgorica. Block of Spuž stone, 3 feet 1½ inch high, 2 feet broad, 2 feet thick, finely cut letters 2¾ inches high. [C. I. L. 12682.]

DIVO
TRAIAN
D D

On the right side of the same stone a stonecutter's mark, roughly cut in 2¼ inch letters.

CON

7. Dukle: from the west gate, outside which it lies. Panelled block of Spuž stone, 4 feet 1 inch high, 2 feet broad, 1 foot 10 inches thick. Letters, 2 inches

to $1\frac{1}{2}$ inch. The inscription is purposely defaced, as the inscriptions of this emperor often are. [C. I. L. 12683.]

I M P	Imp(eratori)
C A E S M	Caes(ari) M.
Λ V R E L	Aurel(io)
S E V E R O	Severo
Λ L E X Λ N	Alexan-
D R O P I O	-dro Pio
F E L Λ V G	Fel(ici) Aug(usto)
P O N T M	pont(ifici) m-
A X T R I B	-ax(imo) trib(uniciae)
POT · P · P ·	pot(estatis) p(atri) p(atriae)
C O S · I I ·	co(n)s(uli) II
· R · P ·	r(es)p(ublica)
D O C L I	Docl[e]-
A T I V M	-atium.

8. Planinica near Povje: copied by Novaković. [C. I. L. 8285.]

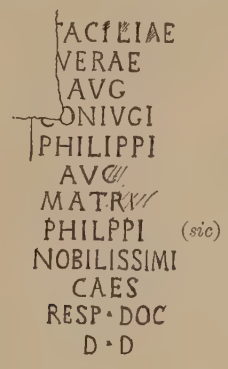
IMP · CAES
M · IVLIO
PHILIPPO
PIO · FELICI
AVG

9. Dukle, built into the bridge by the west gate; copied by Sticotti. Purposely erased throughout. [C. I. L. 12684.]

IMP CAES
. . . . . AV^{G}
. . . . . OT
P · P · COS · $\overline{II}$
RESPUBLICA
DOCLEATI
VM

Possibly dedicated, as Sticotti suggests, to Philip; more probably identical with No. 15, and belonging to Valerian.

10. Dukle: from the west gate, outside which it lies. Block of Spuž stone, panelled on three sides, 4 feet 6 inches high, 2 feet 1 inch broad, 1 foot 11 inches thick. The upper left corner is cut away. Letters $2\frac{3}{8}$ inches, rather rudely inscribed. Surface a good deal chipped. [C. I. L. 12685.]



11. Now at the palace of Krušna Glavica, opposite Podgorica. Panelled block of Spuž stone from Dukle, 4 feet 7 inches high, 2 feet $1\frac{3}{4}$ inch broad, 2 feet thick. Letters, $2\frac{3}{8}$ inches, a good deal defaced. [C. I. L. 12686.]

M · IVLIO
PHILIPPO
IMP · M · IVLI
PHILIPPI
AVG · FILIO
NOBILISSI
MO · CAES ·
RESP · D ·
D · D ·

Dedicated to the younger Philip.

12. Planinica near Povje, copied by Novaković. [C. I. L. 8286.]

Imp. Caesar
C. Messius Quintus
DEC
TRAIANVS
PIVS FELIX
AVG

Decius Trajanus reigned A.D. 249-251. The fact that his name appears here

in the nominative seems to separate this inscription from the imperial dedications which precede and follow it.

13. Dukle: from the west gate, outside which it lies. Block of Spuž stone, panelled on three sides, 4 feet 9 inches high, 2 feet broad, 1 foot $10\frac{1}{2}$ inches thick. Letters $2\frac{3}{8}$ inches, much worn. [C. I. L. 12687.]

IMP
CAES·
CVIP O
GALLO
PIOFEL
AVG
PONMAX
PP TR PO
COS·II RP
DOCL·
·D·D·

Dedicated to the Emperor Vibius Gallus in A.D. 252. In line 3 Sticotti read VIBIO.

14. Dukle: from the west gate, outside which it lies. Block of Spuž stone, panelled on three sides, 4 feet $2\frac{1}{2}$ inches high, 2 feet $\frac{1}{2}$ inch broad, 1 foot 11 inches thick. Letters $2\frac{5}{8}$ inches. Surface much weathered. [C. I. L. 12688.]

I·M·P
CAES
CVIBIO
VOLVSI
ANO·PI
OFEL·
AVG·
PON·MAX·
PPTRPOT
CO[illegible]·II·R·P·
RDOCL·
·D·D·

Dedicated to the colleague of the preceding, in A.D. 253. The first letter of line 11 is unintelligible, and may be a stonecutter's error.

15. Dukle: from the west gate, outside which it lies. Block of Spuž stone,

panelled on three sides, 4 feet 8½ inches high, 2 feet 2½ inches broad, and 1 foot 9 inches thick. Letters about 2⅜ inches. The stone seems to have been inscribed three times over, and finally the writing has been purposely obliterated. [C. I. L. 13632. See No. 9.]

IMPCAES	Imp(eratori) Caes(ari)
I ICINIO	[P. L]icinio
VALERIAN	Valerian(o)
PIOFELAVG G	Pio Fel(ici) Aug(usto) <G>
PONT MAX	pont(ifici) max(imo)
TRIB · POT	trib(uniciae) pot(estatis)
P P COS II	p(atri)p(atriae) co(n)s(uli) II
RESPVBLICA	respublica
DOCLEATI	Docleati-
VM	-um.

The date is A.D. 254: as often on imperial inscriptions of this period the years of the *tribunicia potestas* are not stated. In line 4 the final G is inscribed on the moulding, and seems to be a survival from an erased inscription.

16. Found *in porta urbis Docleae juxta lacum Labeatem.* Now lost: a copy is preserved in an anonymous MS. collection of Dalmatian inscriptions made in or before the sixteenth century. [C. I. L. 1705.]

IMP · CAES · P · LICINIO · GALIENO
PIO · FELICI · AVG · PONT · MAX
TRIB · POT · P · P · CONS · II · RES
P V B *l* · D O C L E A T I V M

Inscription in honour of the emperor Gallienus, erected A.D. 257—260.

17. Dukle: built (side upwards) into the north wall of the small church, inside. Fragment of a block of Spuž stone, about 11 inches square. Letters, first line, about 4 inches; second line, 3 inches. [C. I. L. 13633.]

Caesa [R T·]
p. [Λ·TR] *pot.*

18. Dukle: found outside the north-east corner of the small church. Frag-

ment of a panelled block of Spuž stone, 1 foot ½ inch broad, 10¼ inches high, complete only to right. Letters 3 inches, in bad condition. [C. I. L. 13634]

. . . . . nob(ilissimo)
[Caesari res publica] d(edit) d(edicavit).

19-22. The following eleven fragments belong to inscriptions which occupied the epistyle of the civil basilica. As seen by Sticotti, they lay in four groups in front of the façade, facing the forum, in the following order, except that III*b* was found first by Munro :

Façade

IV	III*b*	II	I
		a b	*a b*
		c d	*c d*

Jelić, who also saw the inscriptions, observes that they stood over the four entrances from the forum into the basilica. They are all in honour of the same boy, M. Flavius Balbinus, whose parents were obviously important persons at the time when the basilica was erected.

19. Dukle : four fragments of the architrave of the civil basilica, lying together before the east front of the building, near the north end. Lengths : block (*a*), 4 feet 7 inches ; block (*b*), 2 feet 7½ inches ; block (*c*), 2 feet 10 inches ; block (*d*), 4 feet 3 inches. The architrave consists of travertine blocks, 2 feet 6 inches high, and 1 foot 6 inches thick. The inscribed surface is 11 inches broad, and occupies the top of the block. The inscription is placed for a point of view from below, near the top of the blocks. Letters, in the upper line, about 3 inches, in the lower about 2¼ inches, finely cut and picked out with red. Measured by the following inscription, the space between the left edge of the O in *Balbino* and the left edge of the C in *defuncto* must have been 3 feet 1 inch The total length of the inscribed blocks would therefore amount to from 15½ to 16 feet [C. I. L. 8287=12692 I.]

M. Fl(avio), M(arci) f(ilio), Quir(ina), Balbino : [huic defun]c(to) ordo Docl(eatium) honores omnes et statuam
equestr(em) decrev(it). [Fl(avius) Fronto et] Fl(avia) Tertulla parentes inauraverunt.

20. Dukle: four fragments of the architrave of the civil basilica, lying together before the east front of the building, about 25 feet south of the preceding group. Lengths: block (*a*), 2 feet 10 inches; block (*b*), 5 feet $\frac{1}{2}$ inch; block (*c*), 4 feet 1 inch. Other dimensions as in the preceding inscription. There is lost between the right edge of the Q in *Quirina* and the left edge of the second B in *Balbino* 1 foot $5\frac{1}{2}$ inches; between the left edge of the D in *ordo* and the middle of the M in *omnes*, 4 feet 1 inch. The total length of the stones was therefore about $17\frac{1}{2}$ feet. One fragment, roughly the same as (*c*) in No. 19, was not seen by Munro, but was copied by Sticotti and Rovinski. [C. I. L. 8287=12692 II.]

The inscription is *verbatim* and *litteratim* the same as 12,992 i, except that in place of PARENTES · INAVRAVERVNT the word FIL occurs after TERTVLLA and under the M of OMNES.

21. Dukle: fragment of the architrave of the civil basilica, lying before the east front of the building, about twelve paces south of the preceding group. Length, 6 feet 4 inches, to which must be added about 6 inches of broken stone on the left of the inscription. This stone has been long exposed to the weather, but is quite legible. [C. I. L. 8287=12692 IV.]

abrum or *frum. dand.*

For the name of the emperor see the note on No. 26.

22. Dukle: two fragments from the architrave of the civil basilica. The right hand piece lies before the east front of the building near the south end, about 14 paces south of the preceding block. It is 5 feet $2\frac{1}{2}$ inches long, otherwise similar to the other architrave blocks. The left hand piece was found in the middle of the small church about a quarter of a mile distant from the basilica; it is 2 feet 9 inches long, 10 inches high, and 1 foot $\frac{1}{2}$ inch thick. Letters, the first line about 3 inches; the second about $2\frac{7}{8}$ inches. [C. I. L. 8287=12692 III.]

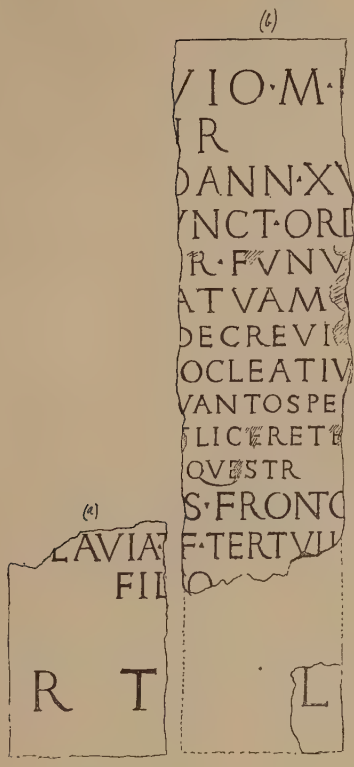
. . . . . ordo Doc]l(eatium) honores omnes et statuam equestr(em) [decrevit . . . parentes] inauraverunt.

This inscription is distinguished from all the others on the architrave of the basilica by the larger size of the letters in the second line. It may be conjectured, therefore, that it belongs, not to the east front like the rest, but to the south.

23. Dukle: in the pavement of the civil basilica. Slab of Spuž stone, 4 feet $9\frac{1}{2}$ inches long, 1 foot $11\frac{1}{2}$ inches broad. Letters $2\frac{3}{4}$ inches to $1\frac{1}{4}$ inch, elaborately cut and in good style. The left side is much worn, and has been smashed into pieces by the fall of the building; the right side, protected by a wall, is in good condition. [C. I. L. 12693=13629.]

M. Flavio, M(arci) f(ilio),
Quir(ina),
Balb[i]no ann(orum) xv :
hu[i]c defunct(o) ord(o)
m[uni]c(ip.) D[o]c[l](eatium) funus
[publicum et] statuam
[equestr(em) ? dec]r(evit) : item
[decrevit] honores
q[uanto]s pe[r leg]es caper[e]
[liceret et stat(uam)] equest(rem)
[M. Flavius. M. f ?] Quir(ina)
. . . . . statuam
t(estamento) p(oni) j(ussit)
M. Flavius Fronto
et Flavia Tertulla
parente[s i]mpens(a) adject(a)
inauraverunt.
[M Flav]ius Fr[onto] . . . . . .

24. Dukle: in the civil basilica. Two fragments of a slab of Spuž stone similar to the preceding, but possibly an inch or two broader. (*a*) was found lying loose in the building. (*b*) was discovered by Mr. Milne face downwards in the pavement. It has been roughly hewn to its present shape, and is broken into many pieces. The lower part was completely rotten and crumbled to dust on being touched. Letters 3 inches to $1\frac{3}{8}$ inch. [C. I. L. 12694=13630.]



[M. Fla]vio, M(arci) [f(ilio)],
[Qui]r(ina),
[Balbino] ann(orum) xv :
[huic defu]nct(o) ord(o)
[? ampl. decu]r(ionum)funu[s]
[publ(icum) et st]atuam
[equestr(em)?] decrevi[t] :
[item ordo D]ocleatiu[m]
[honores q]uantos pe[r]
[leges (capere)] liceret [et]
[statuam e]questr(em).
[Flaviu]s Fronto
[Fl]avia T. f. Tertu[lla]
fil[i]o

Possibly this slab and the preceding are from the base of equestrian statues. The last line R T . . . L (*Te*]*rt*[*u*]*l*[*la*) may continue the last line of the preceding. The supplement to line 5 was suggested by Hirschfeld.

25. Dukle : not far from the junction of the Zeta and Morača. A block of Spuž stone from an architrave, 2 feet 3 inches long, 1 foot 9 inches high, 1 foot $4\frac{1}{2}$ inches thick, broken to right. Letters 4 inches. [C. I. L. 13640.]

fac. cu
? inaurave R · PECVNIAS*ua*

26. Dukle: copied by Rovinski, sought in vain by Munro. [C. I. L. 12695.]

M · FLAVIO · T · F · QVIR
FRONTONI SACERD
IN COLONIS · NARON
ET EPIDAVRO IIVIR · I · D
IV]IO RISINO IIVIR
CVI INQ ION[IN COI
SCCDR IIVIR IDQVIM
IIAM //// PRAEF ////
PLEPS
EX AERE CONLA[C

M. Cagnat suggests: *M. Flavio T. f(ilio) Quir(ina tribu) Frontoni, sacerd(oti) in coloni(i)s Naron(a) et Epidauro, ii vir(o) i(ure) d(icundo) Iu[l]io Risino, ii vir(o) [q]uinq(uennali), [p]on[ti(fici)] in co[l] Sc[o]dr(a) ii vir(o) i. d. qui[nq.], [fl]amini [diui Aug.] praef. [fabrum], pleps ex aere conla[to].*

The lost emperor's name in line 8 cannot have been a long one, and as Flavius Fronto may well have been the father of the boy mentioned in No. 19, we may perhaps suggest Titus and refer the inscription to the origin of Doclea (see No. 4).

The references to Risinium and Scodra are important; as M. Cagnat has pointed out, they show that Risinium received city rights from Augustus, while Scodra seems to have been raised from the rank of *Municipium* to that of *Colonia* by the Flavian emperors.

27. Dukle: found just outside the door of the large church. Morsel of a slab of Spuž stone, 6 inches high, 5 inches broad, 3 inches thick, broken on all sides. Letters 1 inch, poorly cut. [C. I. L. 13639.]

Possibly part of the dedication of the church (cf. No. 28).

28. Dukle: found beside the gateway facing the west front of the small church. Lintel block of Spuž stone, 7 feet 6 inches long, 10 inches high, 1 foot 3½

inches thick. Letters 4 inches, plainly and deeply cut on a concave moulding in the middle of the lintel. [C. I. L. 13654.]

Ausonia diac(onissa) pro voto suo et filiorum suorum f(aciendum) c(uravit).

29. At Berane, in the valley of the Lim, Albania, but said to have been brought from the neighbouring village of Budimlje, built upside down into the south wall of the church of Gjurgjevo Stupovi: panelled block of coarse bluish marble. Above the inscription is a relief of three busts with clasped hands, over two garlands. The letters are picked out with red. [C. I. L. 13641.]

D M S	D M S
AVR·VERZANO	Aur(elio) Verzano ?
LIBERTOQ	liberto q(ui)
VIXSIT·AN	vixsit an-
NIS LXXXV	-nis LXXXV.

In line 3 a Greek Λ seems to be used for L.

30. Zlatica, about two miles east of Dukle: dug up in the old church. Block of Spuž stone, much broken; apparently a capital split in half vertically, 1 foot 3 inches high, 1 foot broad. Letters 1 inch to $1\frac{3}{8}$ inch. Copy and squeeze by Mr. Milne. [C. I. L. 13642.]

31. Dukle: in a house by the north wall. Small panelled slab, 1 foot 1 inch square, 5 inches thick. Letters from $1\frac{1}{4}$ inch to $\frac{3}{4}$ inch. [C. I. L. 8288*a*.]

C · CANINIO
VALENTI
CANINI IV
LIANVSET
PROCVLVS ·
PATRIPISSIMO
FEC

32. Dukle, at the meeting of the Zeta and Moràča. Now at Ragusa; copied by Hirschfeld. [C. I. L. 8287.]

Q · CASSIO · AQVILAE
DECVRION · I EPIDIA · CE
LERINA · VXOR · ET . CAsSIA
AQVLINA · FILIA · PATRI
PIISSIMO · ET · SIBI · ETSVIs
VIVAE · FECERVNT

"To Q. Cassius Aquila, a decurion [of Doclea], erected by his wife Epidia Celerina and his dàughter Cassia Aqu(i)lina, to him, themselves, and their household, in their lifetime."

33. Podgorica, in the Serbian cemetery; copied by Bogišić and Sticotti. Bad lettering. [C. I. L. 8289.]

D · M · S
CLANICETO
MARITO PIENTISSIMo
CL OLYMPIA · VXOR ·
MEMORIAM POSVIT
QVI · VIXIT · AN · LVIIII
M · VIIII DIES · V · HAS
PRO MERITIS SEDES
CARISSIMO CONIVGI-
MEMORIAM POSVIT

Erected to Claudius Anicetus, aged 59 years 9 months 5 days, by his wife Cl. Olympia.

34. Dukle: lying in the ravine close under the bridge, no doubt from the west gate. The upper part of a block of Spuž stone panelled on three sides, 1 foot 8 inches high, 1 foot 11 inches broad, $11\frac{1}{2}$ inches thick, with $2\frac{1}{4}$-inch letters. The inscription is complete. [C. I. L. 12707.]

CL · Q · FIL
PROBILLAE

Cl(audiae) Q(uinti) fil(iae) Probillae.

35. At the palace of Krušna Glavica opposite Podgorica. Block of Spuž stone

from Dukle, 2 feet 8 inches high, 1 foot 11¾ inches broad, 1 foot 8 inches thick. Letters 2 inches to 1½ inch. About a third of the face is broken away on the left, but the inscription seems to be complete. [C. I. L. 12691.]

M·EPIDIO
P·FIL·QVR
LATINO·DEC
D

i.e. M · Epidio P(ubli) fil(io) Quir(ina) Latino, dec(urioni) D(ocleati).

36. Dukle: in the western cemetery. Small block of Spuž stone, 11½ inches high, 10 inches broad, 6 inches thick. Letters about 1 inch.; much worn to left. [C. I. I. L. 12708.]

ЄΠOIHCЄΦ	*ἐποίησε* Φ -
ΛΑΚΙΔΙΟCΧ	- *λακίδιος* Χ -
ΛΡΙΤΩΝ	- *αρίτων*
ΛΠΠΙΑΝΩ	Ἀππιανῷ
///////HTHM	· · · · *ητῃ μ* -
///////XΛPIN	[- *νήμης*] *χάριν*
///////////	· · · · ·

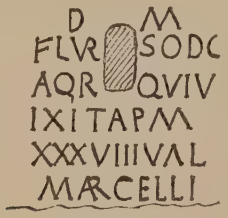
This is the only Greek inscription yet found at Doclea.

37. Zlatica, dug up in the old church. Limestone slab, 2 feet 2 inches high; broken at both sides. Letters 1½ inch. On the back is carved a cross. Surface much worn. Copy and squeeze by Mr. Milne. [C. I. L. 13643.]

. . . . . .
. . . F . . . .
I · ΓL · CRE*scenti*
p ATR . . . . .
5 Ϙ · V · ANNIS L
FL · CRESC*ens*
B · M

38. Dukle: found in the large church, near the south-west corner. Block of Spuž stone, cut away at the top and bottom, 2 feet 1 inch square. An ornamental border runs down each side. The top of the stone was occupied by relief of three half-figures facing to right, each holding an object. Beneath the relief is a band of ornament and the panel containing the inscription. In the middle of the

second and third lines of the inscription is an upright hole, which must have been there before the stone was inscribed, for it has been carefully avoided by the cutter. [C. I. L. 13638.]



D(is) M(anibus)
Fl(avio) Urso d(e)c(urioni)
Agr(uvino ?) qui v -
- ixit a(nnos) p(lus) m(inus)
xxxviii Val(erius)
Marcelli -
[nus] . . .

Agruvium was a small Dalmatian town close to the modern Cattaro.

39. Dukle: in the civil basilica. Panelled block of Spuž stone, 2 feet 9 inches high, 1 foot 6 inches broad, broken on the right. The border of the panel is chiselled away on the left, but the inscription is complete on that side. Letters $2\frac{1}{2}$ inches to $1\frac{7}{8}$ inch, well cut in good style. M. Cagnat, judging from a squeeze, assigns it to the end of the first or beginning of the second century, to which date he also ascribes Nos. 19 to 22. [C. I. L. 8287 = 12678.]

T·FLAVIV*s*
VERECWDV*s*
THAMARIA
IIVIRID
PRAEF·FAB *r(um)*
T · F · I .

Thamaria may be a Dalmatian place-name.

40. Dukle: now at Ragusa. Copied by Mommsen. [C. I. L. 1707 = 8282.]

D M S
FL EVTIAE
PIEAITISIM
EQVAE VIXIT
AN PLVS MINVS
XXX EPIDIVS
FILIPVS MARI
TVS POSVIT

To the memory of Flavia Eutia, aged about xxx; erected by her husband, Epidius Filipus (Philippus).

41. Dukle: in the western cemetery. Small panelled block of Spuž stone, 1 foot 1½ inch high, 9½ inches broad. Letters about 1 inch. [C. I. L. 13644.]

D·M·S·
FL·IANVARI
AEQVAEVI
XITAN·XLVIII
GRATVSCON
IVGIINCOMP
ARABILI PO
SVIT

i.e. D(is) M(anibus) s(acrum) Fl(aviae) Januariae quae vixit an(nos) XLVIII. Gratus conjugi incomparabili posuit.

42. Dukle, at the north-east gate: copied by Neigebaur and Bogišić. [C. I. L. 1706=8281]

F//AVIA
C · FILIA
si B · POS
L · D · D · D

Probably the conclusion of a memorial stone. *Flavia C. filia* reappears on Nos. 45, 56.

43. Dukle: copied by Rovinski. [C. I. L. 12696.]

· · AVIA
PINNIA
TFI
FL · EPDA/S
F · C ·
L · D · D · D

[*Fl*]*avia Pinnia t*(*estamento*) *f*(*ieri*) *i*(*ussit: Fl. Ep*[*i*]*d*[*i*]*a*[*n*]*us f*(*aciendum c*(*uravit*)*: l*(*ocus*) *d*(*atus*) *d*(*ecreto*) *d*(*ecurionum*). The emendation of line 4 is due to M. Cagnat.

44. Dukle: in the western cemetery. Small panelled block of Spuž stone, 1 foot $3\frac{1}{2}$ inches high, $11\frac{1}{2}$ inches broad. Letters $1\frac{1}{4}$ inch. [C. I. L. 13645.]

D · M
F·PINNIAE
Q·VI·ANXXX
M·VALERIVS
QVINTIAN
VS·VX·ET·F·
QVINTINAE
F·Q·VI·AN·X

For *F(lavia) Pinnia*, cf. No. 43.

45. Dukle: copied by Rovinski. [C. I. L. 12697.]

IIID · II
FLAVIA
C · F
RVFINA
FILIO
POSVIT
L D D D

The first remaining line contained probably an official title like *iivir. id. ii.*, belonging to the man in whose memory the stone was erected. Flavia C. f. Rufina may be connected with the persons mentioned in Nos. 42, 56.

46. Dukle: found in the basilica and copied by Petričevic and Rovinski. Munro saw only a fragment $8\frac{1}{2}$ by $7\frac{1}{2}$ inches, with 1-inch letters, belonging to the lower left side. [C. I. L. 12709.]

D M
M I S E R I M E
INFELICISSIME
FE VRSILLAE
QVE VIXIT AN
VI MII DXXV
FL VRSVS ET FL
BAEBIA PAREN
TES FILIAE
CE

D. m. mise(r)rim(a)e infelicissim(a)e F[l]. Ursillae qu(a)e vixit an(nos) vi m(enses) ii d(ies) xxv. Fl. Ursus et Fl. Baebia parentes filiae [*inno*]*ce*[*ntissimae . .*]

In 6 Munro read ME, in 8 BA, in 9 IES.

47. Dukle: now at the hut in the western cemetery. Small panelled slab, 1 foot 7 inches high, 1 foot 6 inches broad, 4 inches thick. Letters from $1\frac{1}{2}$ to 1 inch, well cut. [C. I. L. 12702.]

D ꝺ M ꝺ C	*i.e.* D(is) M(anibus) C.
GORDMAXI	Gord(io) Maxi-
MIANOART	-miano art-
ISGRAMATIC	-is gram(m)atic-
ÆGRÆCÆPERI	-ae Graecae peri-
TISSIMOꝺQꝺFL	-tissimo. Q. Fl(avius)
HELENVSAMI	Helenus ami-
COINCONPA	co inconpa-
RABILI	ribili.

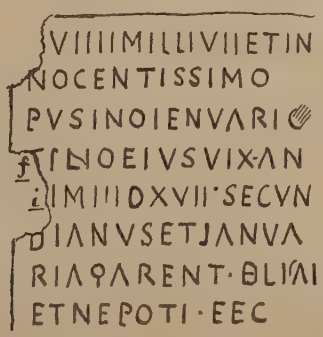
48. Dukle: now in the Ragusa Museum. Copied by Hirschfeld. [C. I. L. 8291.]

D · M · S
IADESTINVS
BAEBIOR · SER
SIB · E · S · V · F ·

D. M. s., Iadestinus Baebior(um) ser(vus) sib(i) e(t) s(uis) v(ivus) f(ecit).

The slave's name is formed from the town name Iadera. For the Baebii cf. No. 31.

49. Podgorica: outside the reading-room. Small column-base of Spuž stone, brought from Zlatica. The inscription occupies the square under-face of the base. Letters about $1\frac{1}{2}$ inch, rudely inscribed and carelessly picked out with black. When seen by Petričevic the initial letters of 4, 5, were extant. [C. I. L. 12711.]



Tombstone to a daughter and grandson: the daughter's name was given with

the beginning of the inscription on another stone. The whole ran probably somewhat thus: [D. M. . . . . quae vixit annos] VIIII m(enses) II d(ies) VII, et innocentissimo Pusino J[a]nuario [f]ilio ejus, vix(it) an(nos) [I]I m[enses] III d(ies) XVII, Secundianus et Januaria parent(es) filia[e] et nepoti [f]ec(erunt).

In all probability the word *Pusino* is equivalent to *Pupo*, which is commonly used as the *praenomen* of children too young to have legal *praenomina* of their own; it does not seem to occur elsewhere in literature or epigraphy. In line 7, P is formed like a Greek koppa, as happens occasionally on rudely cut inscriptions (*e.g.* Eph. vii. 1025).

50. Dukle: in the western cemetery. Small block of Spuž stone, 1 foot $1\frac{1}{2}$ inch high, 1 foot $3\frac{1}{2}$ inches broad, $4\frac{1}{2}$ inches thick, with letters about 1 inch. The upper right hand corner is broken away, but the inscription is complete. [C. I. L. 12710.]

D M
M · IVL · LACONI
QVI VIXIT · A · XLV
HVIC · DEE · BAEB
TAMODERATA ·
MAITO · B · *N*
E ·

i.e. D(is) M(anibus) M. Jul(io) Laconi, qui vixit a(nnos) XLV: huic def(uncto) Baeb[i]a Moderata ma[r]ito b(ene) m(erenti) [f(ecit)].

51. Dukle: copied by Sticotti. [C. I. L. 12699.]

M · LICINIO · PROBo
DEC
QVI · VIXIT · ANN · L
M · LICINIVS · SEVERVS.
PATRI · OPTIM

52. Dukle, found 1890: copied from a squeeze by Hirschfeld. [C. I. L. 12690.]

M MA/////
A M B A C T I
C O R N E L I
DOM BRYXIA
P SCRASIVS
NAEOLVS ÆQ
P SCRIBAQ
AMICO IN
CONPARABI

Probably, much as Hirschfeld suggests, *M. Ma[rii?] Ambacti Corneli[ani?], dom(o) Br(i)xia, P. Scrasius Naeolus aeq(uo) p(ublico), scriba q(uaestorius) amico incomparabi(li).* *Bryxia*, *Naeolus*, *aequo* are variants for *Brixia*, *Naevolus*, *equo*, for which many parallels occur.

53. Now, at the palace of Krušna Glavica, opposite Podgorica: panelled block of Spuž stone from Dukle, 2 feet 7 inches high, 1 foot $10\frac{1}{2}$ inches broad, 1 foot 8 inches thick. Letters $2\frac{1}{4}$ inches to $1\frac{3}{8}$ inch. [C. I. L. 12700.]

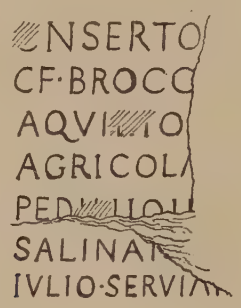
M·NOVIO	M. Novio
QI·IVSTO	Qui(rina tribu) Justo
DEC·EXTESTA	dec(urioni), ex testa-
MENTO·EIVS·	-mento ejus
T·NOVIVS·MA	T. Novius Ma-
XIMVS·FRA	-ximus fra-
TER·PONENDVM	-ter ponendum
CVRAVT·	curav[i]t
·L·D·D·D	l(oco) d(ato) d(ecurionum) d(ecreto).

54. Dukle: in the western cemetery. Small panelled block of Spuž stone, $9\frac{3}{4}$ inches high, 1 foot $\frac{3}{4}$ inches broad. Letters from 1 inch to $\frac{3}{4}$ inch. [C. I. L. 12712.]

QVARTION
C·FLA·IVSTI
SERVO·PLA
IA CONVBER
NALIS

i.e. Quartioni C. Fla(vii) Justi servo Pla [- ?]-ia (Flavia ?) contubernalis.

55. Dukle: found in the small church, the upper part built into the south wall, the lower part lying in the middle of the building. Panelled block of Spuž stone, 2 feet $10\frac{1}{2}$ inches high, 1 foot $10\frac{3}{4}$ inches broad, 1 foot 9 inches thick, broken across. The surface is chipped away at both sides, but the inscription is complete on the left. Letters $1\frac{3}{4}$ inch to $1\frac{1}{4}$ inch, somewhat worn. [C. I. L. 13635.]



i.e. [C]n. Serto[rio] C. f. Brocc[ho] Aquilio Agricola[e] Ped[an]io F[usco ?] Salina[tori] Julio Servia[no . . . .

All the names probably belong to one man, who may have been, as Hirschfeld suggests, by birth Sertorius Brocchus, by adoption son of Cn. Pedanius Fuscus Salinator (cos. A.D. 118), the son-in-law of L. Julius Ursus Servianus (cos. before 98 and in 102). Such accumulation of names was not uncommon, especially in the second century. A C. Sertorius Brocchus was pro-consul of Asia at an unknown time.

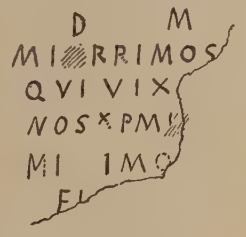
56. At the palace of Krušna Glavica, opposite Podgorica. Block of Spuž stone from Dukle, 3 feet 7 inches high, 1 foot 10 inches broad, 1 foot 11 inches thick. Letters $2\frac{5}{8}$ inches. [C. I. L. 8287=12701.]

SERVNIÆ
MARCELAE
MATRI·
OPTIMAE
FL·C·FIL·
PRISCA
L·D·D·D

57. Dukle: dug up near the surface between the two churches. Two frag-

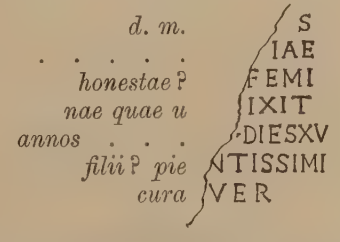
ments of a small marble slab, broken below. Total breadth, 11 inches, height 8 inches, thickness $2\frac{1}{4}$ inches. Letters $1\frac{3}{4}$ inch. [C. I. L. 13648.]

58. Dukle: found on the surface about mid-way between the west gate and the civil basilica. Fragment of rough block, complete only to left, 1 foot $\frac{1}{2}$ inch high, 1 foot $1\frac{1}{2}$ inch broad, $5\frac{1}{4}$ inches thick. Letters about $1\frac{1}{4}$ inch, scratched rather than cut and much worn. [C. I. L. 13650.]



For *Mi*[*se*]*rrimo*, in line 2, compare No. 46.

59. Zlatica: extracted from the wall of a house near the old church. Limestone slab, broken to left, 1 foot $6\frac{1}{2}$ inches high, 1 foot $9\frac{1}{2}$ inches broad. Letters $1\frac{1}{2}$ inch. Copy and squeeze by Mr. Milne. [C. I. L. 13652.]

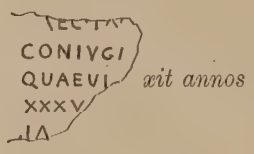


60. Dukle: copied by Hirschfeld from a squeeze. The text is uncertain, especially in 2, 4, 5. [C. I. L. 12704.]

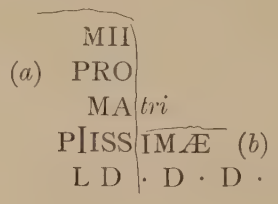
D M
/////VIo NO///
/Vo SoDALI
R o M I ! / / / C D
//NVS ET FL · CI////
IMVS · COLLEGE
B · M · PoS

D(is) M(anibus) [?No]vio No[. . . .]*uo sodali Rom*[. . ; . .]*nus et Fl(avius Ci*[. . . .]*imus Colleg(a)e b(ene m(erenti) pos(uerunt).*

61. Now at Podgorica, outside the reading-room. Small fragment of Spuž stone, broken on all sides except the left. Very rudely inscribed. Letters about 1 inch. The stone is said to have been brought from Zlatica, where Sticotti saw it. [C. I. L. 12703.]



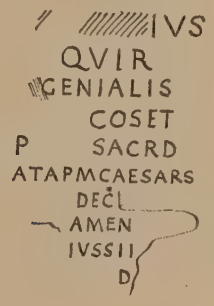
62. Dukle: (*a*) copied by Saski; (*b*) dug out of a rubble wall on the south side of the west gate, a fragment of panelled Spuž stone 9 × 14 inches with two-inch letters. [C. I. L. 8288=13626.]



63. Dukle: outside the west gate. Lower left corner of a panelled block of Spuž stone, 1 foot 1 inch high, 9½ inches broad. Letters, about 2 inches, poor late style. [C. I. L. 13653.]

64. Dukle: found lying in front of the apse in the large church. Panelled block of Spuž stone, 2 feet 7¼ inches high, 1 foot 9½ inches broad, 11 inches thick, broken below, especially at the corners, also at the upper left hand corner, and

elsewhere on the left side. Letters, $2\frac{1}{2}$ inch to $1\frac{1}{4}$ inch, fairly well cut, but badly weathered. [C. I. L. 13636.]



. . . *ius*
Quir(ina tribu)
Genialis
[viator?] co[n]s(ulum) et
p[raet(orum)] sac[e]rd(os)
at a[ra]m Caesar[i]s
dec(urio)
test]amen[to poni
iussi[t]
[L. d. d.] d

Hirschfeld, from a squeeze, reads ER (in ligature) for R in 5, AΛ for M in 6, TE in 8 init. and TO PO in 8 fin. The suggestion of *viator consulum et praetorum* is due to him, and he also points out that this mention of an *ara Caesaris* is the first yet found in Dalmatia proper, and that, combining this inscription with the many imperial dedications (Nos. 4 foll.), we may fix the site of the altar at Doclea itself.

65. Dukle, copied by Rovinski. [C. I. L. 12689.]

PRAEF . . *praef(ectus)*
DAND *frumenti] dand[i . .*
DSROV *proc]os [p]rov*
ΛLEC . . . . *le[g*

The conjectures are due first to M. Cagnat.

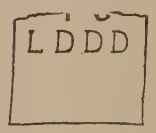
66. Dukle, found in the torrent bed just below the bridge. Fragment of a block of Spuž stone, 1 foot 5 inches high, 1 foot broad, broken all round. Letters, 2 inches, in poor late style. [C. I. L. 13637.]

Rufina
piissim . .

67. Podgorica, old town: block, built into the wall of a house, high up, upside down, broken right and left. Letters in first line about 6 inches. [C. I. L. 82901=2698.]

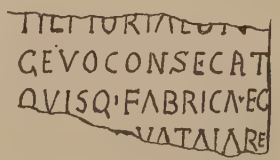
. . . G]emelli[nus ?] . . . A]ug(usti) ob h[onorem].

68. Dukle: outside the west gate. Lower part of a panelled block of Spuž stone, 1 foot $3\frac{1}{2}$ inches high, 1 foot $9\frac{1}{2}$ inches broad. Letters $2\frac{1}{4}$ inches, in good style.



[p(onendum)] c(uravit) l(oco) d(ato) d(ecreto) d(ecurionum).

69. Dukle: found outside the south wall of the large church. Fragment of a panelled slab of Spuž stone, 9 inches high, 1 foot $1\frac{1}{2}$ inch broad, $2\frac{1}{2}$ inches thick. The slab is broken at the top and bottom, and the border to left, but the inscription is complete on both sides. Letters $1\frac{1}{2}$ inch, picked out with red. [C. I. L. 13651.]



Long(a)evo seems plain; the rest is unintelligible.

70. Podgorica: copied by Petričević. [C. I. L. 12705.]

In line 2, Hirschfeld suggests *pro]misit.*

71. Budimlje (about a mile north-east of Berane, in the valley of the Lim):

in the old churchyard. Stone about 7 feet long and 3 feet broad. Surface much worn. [C. I. L. 13646.]

Along the upper edge : . . IS . . . M . . . . . .

Along the lower edge : . . . . . ΛNNΛI//AX//IIASCCI . . . .

Possibly . . Anna [M]ax[im]ia Sc[odrina ?]

72. *Ibid.* Similar stone. [C. I. L. 13647.]

About the middle : T . . . . . \ M MAXIMVS

Along the lower edge : MAXI . . . . . I\ SII

The last word may be *Iusti*.

73. Berane : built into the south wall of the church of Gjurgjevo Stupovi. Coarse bluish marble. [C. I. L. 13649.]

VALE

74. Dukle : copied by Rovinski. [C. I. L. 12713.]

IL
AE
CE
FI

75. Dukle : in the civil basilica. Fragment of Spuž stone, broken on all sides, $11\frac{1}{2}$ inches high, 9 inches broad. Letter, $2\frac{1}{4}$ inches. [C. I. L. 12714.]

76. Cetinje, in the museum : on a tile from Dukle. Copy and squeeze by Mr. Milne.

CLOAM

[Q] Clodi Am[brosi]

Cf. C. I. L. iii. 3214, 2 ; Cagnat, No. 17, gives it imperfectly.

77. Dukle : on a fragment of tile found in the large church.

AI

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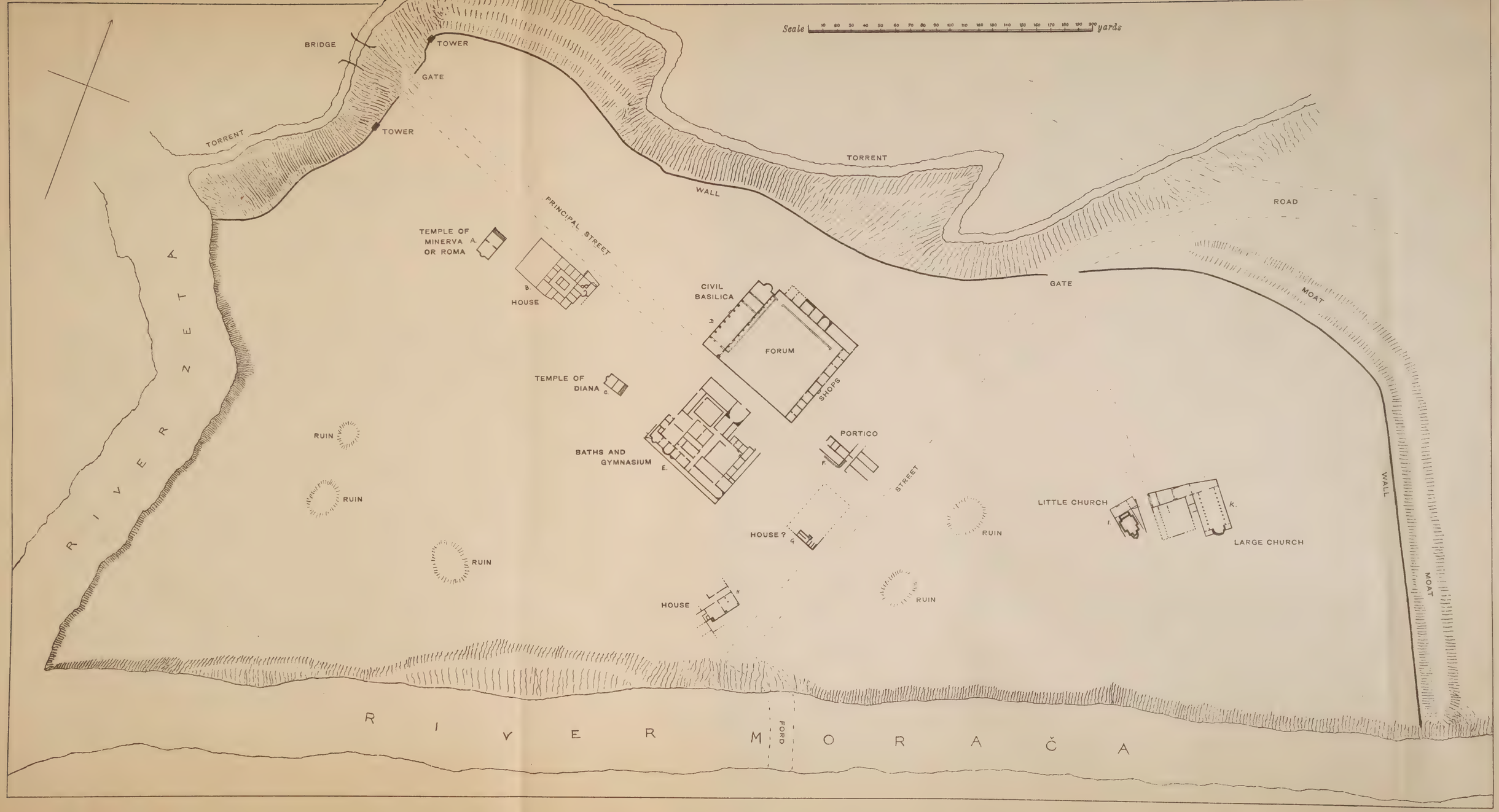


PLAN OF THE ROMAN TOWN OF DOCLEA IN MONTENEGRO.

IV.—*Notes on the Cathedral Church of St. Cecily at Albi.*

By R. W. Twigge, *Esq.*, *F.S.A.*

Read December 6th, 1894.

"Ce n'est pas seulement une église, c'est un admirable musée."—Chateaubriand.

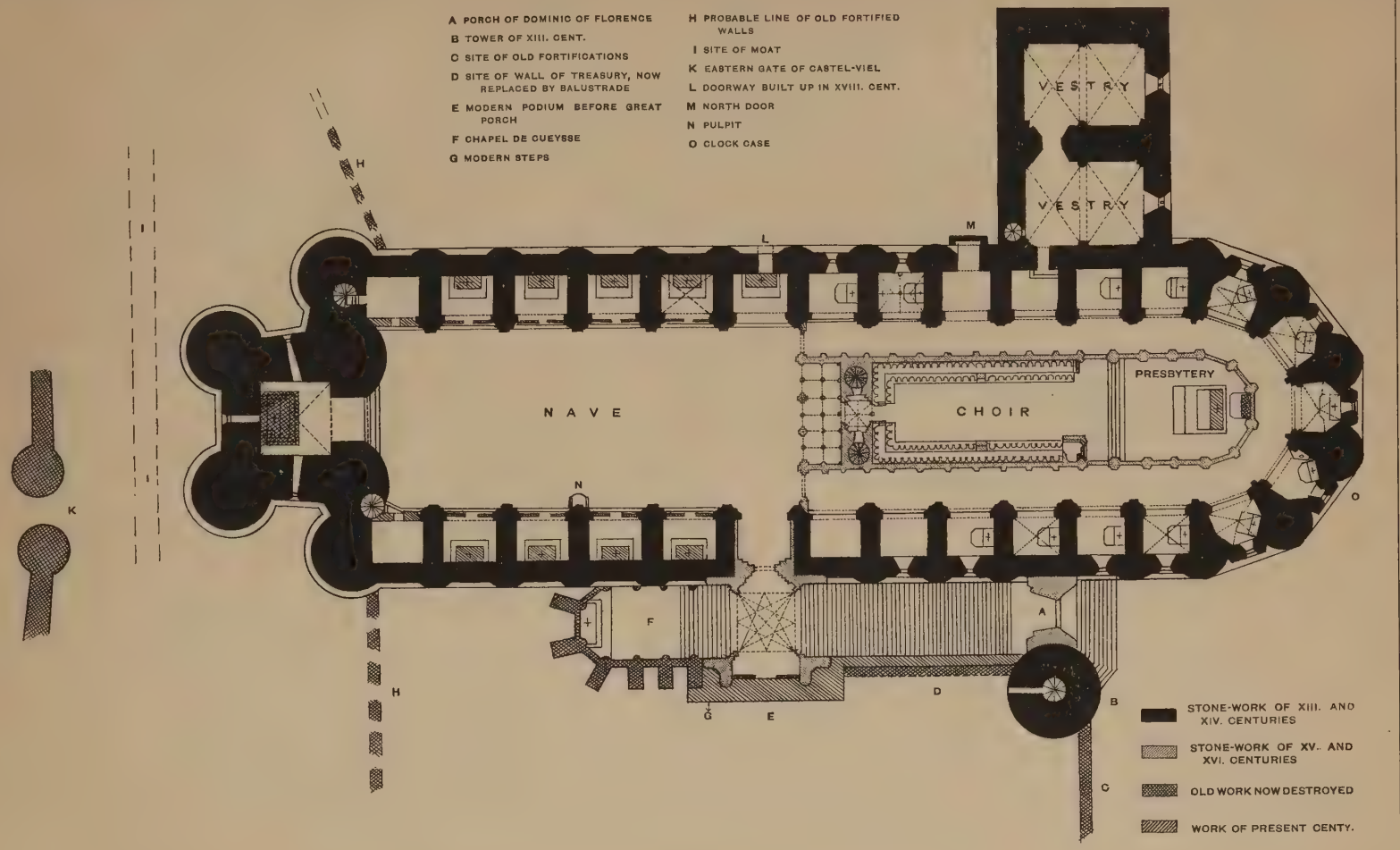
The city of Albi is built on the steep banks of the Tarn, which drains the high table-land sloping gradually from the Cevennes to the vast plain of Languedoc. From whichever side the city be approached the lofty and massive structure of the cathedral church is seen dominating the surrounding buildings. The church, with the adjoining episcopal fortress, crowns the cliff on the left bank of the river. Adjacent to the west end of the church, and occupying the extreme point of the cliff, is the site of Castel-viel, now represented by a group of humble dwellings. Here was once a Gaulish *oppidum*, and later a Roman fort was erected to protect the ferry over the Tarn, which divided the territory of the Ruteni. This bourg was defended by an important fort belonging to the viscounts of Albi, who held it from their over-lords, the counts of Toulouse, and it was isolated on three sides by the ravines through which the Tarn and its tributary stream the Verdusse run, and on the east side by a moat dividing it from Albi. The castle of the viscounts was demolished in 1624, but the moat was only recently filled up. This close proximity of an independent town just outside the jurisdiction of the rulers of Albi, and almost touching their fortress, had an important influence on the structure of the present cathedral church. Few records have come down to us respecting the old cathedral church of Albi. It existed in the ninth century, and was situated "infra muros civitatis" and "in declivi ripae Tarni;" but it fell gradually into complete ruin, and its site was given in 1297 by the chapter to the bishop.[a]

[a] *Histoire Générale de Languedoc* (ed. 1874), v. 1360.

When Bernard de Castenet was appointed to the see in 1275 he resolved to build a new cathedral church opposite the old feudal stronghold of the viscounts. The plan provided not only for the church, with its dependent buildings and residences for the canons and clergy, but also for a strong line of fortifications enclosing them, and connecting them with the enormous fortress, with its mighty keep and walls flanked with towers, designed for the episcopal palace between it and the river. In criticizing the cathedral church as it stands to-day, it is important to remember that it originally formed part of a military fortress; in fact was designed to serve, in case of need, as the keep of its surrounding outworks, and to this idea every detail of its construction was subordinated. The western tower is a veritable donjon. Built over against the eastern gate of Castel-viel, and separated from the walls of that bourg by a narrow ditch, the lower chamber within its massive walls long served as a guard-room, from which watch and ward could be kept through the narrow slit of window, on the territory of the Crown across the moat.

The position of the tower, on the extreme edge of the bishop's domain, prevented any porch or entrance to the church being made at the west end of the building. The great door in consequence was placed at the side, midway in the southern wall, and was approached by a flight of fifty steps from the east end. Another porch, strongly fortified, springing from the apse to a tower at one end of the line of enclosing walls, barred the approach of any hostile force to this flight of steps, which mounted between the lofty walls of the church on the north and the treasury on the south. The latter wall was loopholed for the defence of this passage, the only entrance from without the fortress to the church. Two small doors on the north side gave access from the palace, but these did not require defence. The wall of the treasury and the wall extending southwards from the above-mentioned tower were still standing in 1833.[a] The great cloister (enclosing the cemetery), the chapter-house, treasury, and other buildings connected with the cathedral church on its south side, were protected by walls and towers surrounding an extensive piece of ground. On the north side the sacristy and other dependencies were connected by fortified walls with the keep of the bishop's castle, which likewise stood within an encircling girdle of defences descending to the river. The cathedral church itself stands on higher ground than the castle, its site being over 160 feet above the river, while the castle covers the sloping ground, and has some of its walls and but-

[a] Taylor, Nodier et De Cailleux, *Voyage Pittoresque dans l'ancienne France* (Languedoc, 1833).


A PORCH OF DOMINIC OF FLORENCE
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C SITE OF OLD FORTIFICATIONS
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VESTRY
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STONE-WORK OF XIII. AND XIV. CENTURIES
STONE-WORK OF XV. AND XVI. CENTURIES
OLD WORK NOW DESTROYED
WORK OF PRESENT CENTY.
TOISES
1 Toise = 6 ft. 4¾ in.
R. Twigge, F.S.A., fecit 1894

GROUND PLAN OF THE CATHEDRAL CHURCH OF St. CECILY, ALBI.

tresses rising from high-water mark. Such being the original plan, it is natural that the exterior of the church should present an appearance of massive solidity. Its smooth walls, 8 feet in thickness, rising to a height of 107 feet from the ground (since their "restoration" to 134 feet), are pierced with lofty and narrow windows set out of reach of any attack or entrance from without, and are unbroken by flying buttresses, projecting chapels, or other irregular features of outline, which lend such charm to the pointed architecture of the north. With the exception of the porches, the church is built entirely of brick. This material, mellowed by age, and varying in tone from a lovely rose to a dull gray tint, seems to have resisted the ravages of time far better than stone, which would have decayed during the lapse of six centuries; whereas the outer surface of the brick and hard cement used for mortar are to-day as solid as when first erected. The cathedral church, if not quite original in design, was at least uninfluenced by northern architecture in the way that the churches of Narbonne (begun in 1272), the eastern end of Carcassonne, and Bayonne were. These exotics might have been transplanted from beyond the Loire, being examples of the architecture of France, not of Aquitane.

It is possible that the design of Albi may have been taken from the two churches of St. Vincent and St. Michael, which had just been erected in the new *basse-ville* of Carcassonne. At any rate the three are practically contemporary and identical in design, and were the models for a school of architecture in the south, many examples of which may be met with in the provinces of Albi and Toulouse. The peculiarity of this style consists of a single nave, ending in an apse, without transepts, aisles, or a structural chancel, the vault being supported by massive buttresses, between which the side-chapels are placed. There is no doubt that this style was admirably adapted for the use of brick, and the scarcity of building stone in Languedoc caused it to be extensively adopted. At Albi the buttresses project but slightly beyond the walls, and present a semi-elliptic form outside, thus avoiding exterior angles, which would be the first part liable to decay in brickwork. They are carried up, tapering somewhat, to the tiled roof.

Towards the close of the fourteenth century, the idea of a place of defence had become of less importance with the builders, who accordingly left the top of the walls unfinished, and even pierced them below the clerestory, by opening out several clumsy lancet windows, in order to give more light to some of the chapels round the apse. Already a tendency to ornament the building appeared. The outer galleries of the tower were adorned with a stone balustrade pierced with quatrefoils. The great portal of stone was commenced under Louis

d'Amboise about the year 1500. In the closing years of the fifteenth century, the general severity of style of the interior was corrected by the erection of the choir screens, and the completion of the painted decorations of the walls and vault followed. The great western tower, rising to a height of 256 feet, measured from the exterior level of the apse, and over 420 feet above the waters of the Tarn, is composed of three square retreating stages, surmounted by a double-storied octagon. The lowest stage reaches as high as the roof of the nave, and each has an outer gallery running round three sides. At the eastern angles two round turrets, tapering at each stage of the tower and octagon, ascend as high as the top of the latter, to the north-east and south-east sides of which they are united by curtain walls, thus giving an air of great solidity to the whole. The tower was finished up to the roof of the nave by bishop Guillaume de la Voulte (1383-1386), and completed by Louis d'Amboise, probably before 1480, when the stone parapets, pierced with quatrefoils, were added to the galleries outside, to the top of the octagon, and as crowns to the two round turrets, where each panel is composed alternately of a rose and fleur-de-lys. It was the custom of the canons in the seventeenth century to illuminate the tower, on the eve of St. Cecily, by thousands of torches placed on the exterior galleries.

Several bishops of Albi, who were natives of Italy, brought to their new home the artistic and literary tastes of their mother country. The first of them, Dominic of Florence (Bishop of Albi 1379-1382, and again 1397-1410, then translated to Toulouse, where he died 1422), inaugurated a richer style of architecture in the beautiful stone gateway, surmounted by machicolations and battlements, which he erected at the foot of the steps in 1380. It springs from the south side of the apse, uniting it with a round tower of brick, the last remnant left of the old fortifications. This tower, since the "restoration," has been considerably lowered in height and new battlements put on it. The statues and bas-reliefs on this gateway were, for the most part, destroyed during the Revolution; but happily a manuscript account of the church, written in the year 1684,[a] contains a minute description of this portal, which has been carefully restored from the particulars given therein. The tympanum is pierced with open tracery, and in the centre is a niche containing the statue of St. Cecily, over whom hover two angels holding a crown. On her right kneels the donor presented to her by his patron, St. Dominic, with these words, inscribed on the sleeve of the saint, "Hunc

[a] *Description naïve et sensible de la fameuse église Sainte Cécile d'Alby par Bernard de Boissonade, docteur et avocat au Parlement de Thoulouse* 1684 (edited with notes by Eugène d'Auriac, 1857).

tibi dono, mater, quem dudum alui pater." Bishop Dominic has the inscription, "O Alma sancta Cecilia, sis mihi queso propitia." On the left of St. Cecily stands St. Mary Magdalene, with a vase in her hands. On each side of the door are three niches containing statues in the following order, from the doorway outwards, while above the canopy of each niche is a much smaller figure. On the dexter side :

1. St. James the Great. Above him is St. Louis of Toulouse (canonized in 1317) seated, and vested pontifically, but without crozier or staff, to show that he had no jurisdiction at Albi.

2. St. Pons. Above is a canon of St. Cecily kneeling, with his amess over his arm.

3. St. Thomas Aquinas, "avec le soleil, qui fait le symbole particulier de sa science et de ses lumières, qui ont éclairé tout le monde de sa doctrine, au milieu de l'estomac." Above is St. Bernard seated.

On the sinister side :

1. St. John the Evangelist. Above him is St. Salvi, seated.

2. St. Tiburtius (or St. Valerian). Above is a canon kneeling, with amess over his arm.

3. St. Peter of Verona. Above is a Dominican friar, seated, holding a book.

The arms of bishop Dominic, a battlemented tower with the portcullis down, surmounted by a label of three points, appear on two shields placed within quatrefoils, below the machicolation of his gateway. It is repeated on a shield supported by two hounds, "Domini Canes," on each side of the door, below the pedestals of the central statues, and again, under the pedestal of St. Cecily, where it is supported by two angels.

Under the pedestal of St. Dominic is a crouching figure, probably intended to represent a heretic. A similar figure is under St. Mary Magdalene. Several small carvings escaped destruction. On the keystone of the inner arch moulding, above the tympanum, is a small seated figure of the Almighty, holding an orb. On the keystone of the middle arch, within a quatrefoil, is the Crucifixion with St. Mary and St. John ; and on the keystone of the outer arch is the coronation by an angel of Our Lady seated on the right hand of Christ, who holds an orb, and has the right hand upraised in blessing. This group is supported by an angel with outspread wings.

Within this gateway is a large canopied niche on each side. Both are now empty. The corbel supporting the one on the north side is carved with the figure of a deformed man covered with hair, crouching down with his chin resting on

his knees, and a staff in his hand. The corbel opposite represents a woman with deformed legs in a similar attitude. Perhaps these two figures were types of the beggars frequenting the steps (still a favourite haunt for mendicants) at the time when the portal was erected.

Ascending the fifty steps, "aussi doux que le repos même," we reach the great porch of three open arches covering a square platform before the south door. At the angles four massive piers (two of which are engaged in the walls of the nave) support a beautiful vault of complicated design. Above each arch is a *façade* of two stories, in each of which the main features consist of two open arches separated by a central pier adorned with a niche. A pyramidal canopy crowns the whole. All the details are in the richest flamboyant style, and the doorway forming the north side of this truly triumphant arch is in keeping with it.

The great cloister and cemetery were formerly entered through the southern arch of this porch, and a small door near it gave access to the chapter-house. The southern arch is now railed in, and a modern podium erected before it, as the ground outside has been excavated to make a new road across the old cemetery. On the western side, opposite the steps, was a large chapel founded in 1521 by Maître Cueysse, a canon of St. Cecily, from whom it took its name. It was built against the south wall of the church, extending westward the length of two bays of the nave, and consisted in itself of four bays, with a three-sided apse at the west end. The entrance to it was through the western arch of the great porch, from which it was railed off by an iron balustrade. De Boissonade states that this chapel was celebrated for the beauty of its roof, the vaulting being composed of a number of small arches most artistically elaborated, and united "en forme comme d'un petit labyrinthe." At the Visitation made by the archbishop in 1698, this chapel was found to be well built and vaulted, paved with brick, and whitewashed. Destroyed at the Revolution, its removal so injured the stability of the great porch that the vault of the latter fell in. The arches and piers of the latter had to be protected by iron clamps, and it was altogether in a ruinous condition when its restoration was undertaken in 1850. This was faithfully and successfully carried out, casts being taken of all the old sculptured stones remaining, and the new work inserted stone by stone in place of the old. It was an open question at first, whether the porch had ever been vaulted, but the discovery of some ribs of the ancient vault, and of three pendentive keystones (two being found in a neighbouring garden, and the third at the mill near the bridge) decided the question. They were in sufficiently perfect condition to enable the architect to carry out the original design of the vault, without drawing on his imagination for the details. A flight

of steps westward from the great porch now covers part of the site of the chapel de Cueysse.

The statues from the niches of the façades of the porch and doorway had long since disappeared, and there is no record of the saints they represented. The new statues are of local saints, three bishops appearing in the lower story, and three virgins on the upper story of the façades. On the east side are St. Salvi and St. Carissima. On the south St. Amarand and St. Sigolena; and on the west St. Eugene and St. Marciane.

The door itself is about 12 feet in height, and over it is a slightly-curved lintel, supporting some elaborate flamboyant tracery, which fills the upper part of the archway, and now forms a window. This tracery had been plastered over in the last century, and concealed from within by a heavy wooden screen, which also hid the stone carvings continued in the same pattern on each buttress wall within the entrance. These disfigurements were removed and glass inserted in the tracery openings, so now the entire bay of the nave occupied by the main door is visible in all its richness. In the niches outside the entrance were placed statues of the Blessed Virgin, in the centre, under a lofty canopy over the door, attended by two ranks of the blessed. In the upper row on the dexter side are SS. Anne and Paul; with SS. Joseph and Peter on the sinister side. Below are the four patrons of the chief churches of the four archpresbyteries into which the modern diocese of Albi is divided, SS. Benedict of Castres and Michael of Gaillac, opposite SS. Alain of Lavour and Mary Magdalene. In the smaller niches round the arch are figures of twelve angels, holding twelve instruments of the Passion. The sculptor has filled the curved niches in a clever manner with the angels' wings.

On the great porch are shields sculptured with the arms of the cardinals Aimar de Gouffier (1528), Antoine de Prat (1536), and John of Lorraine (1550), and hence it seems as if this porch had not been finished till the episcopal rule of the last-named cardinal, although it was commenced before 1502.

It is necessary to refer briefly to the deplorable "restoration" of the exterior of the church, begun in 1850. This is the more to be regretted since it was the work of the same architect who so efficiently and faithfully restored the great porch and the gateway of bishop Dominic. A solitary turret crowned the buttress at the south-eastern corner of the apse. It had been erected here, as the point nearest to the city, to contain the bells of the clock, so that the chimes might be heard more distinctly by the inhabitants, than if placed in the western tower. The sight of this turret unfortunately inspired the architect with the idea that it had been part of the original design to erect similar round

turrets on all the buttresses! One of the principal works of "restoration" was that of providing a new roof, and adding to the unfinished walls their proper crown.

Indications of a machicolated gallery, with which it had been intended to crown the outer walls, were found *in situ;* but the completion of this design had been stayed, from some cause or other, in the fourteenth century, when the walls were left unfinished, with the eaves of the tiled roof projecting over them. The plans prepared in 1850 provided for the erection of turrets, with hexagonal pyramidal roofs, on the tops of the old buttresses, the raising of the outer walls to nearly 23 feet above their ancient height, the crowning of the new wall with an arcade copied from the fifteenth-century work on the tower, and the placing of a balustrade pierced with quatrefoils on the top of this arcade! The new parapet and five new turrets round the apse were accordingly erected, and an old turret at the south-western corner adjoining the tower was restored to match the others. Only six of the remaining turrets have been carried up halfway above the balustrade, and they seem likely to remain in their present condition. The measurement of the new work superimposed on the ancient walls and buttresses comes to a total of 76 feet in height. As the original height of the old walls, measured from the bottom steps outside the gate of Dominic of Florence, was only 107 feet, the difference made by this lofty addition, and its effect in dwarfing the tower, can be easily conceived. The western tower is now no longer in proportion with the new elevation of the church. Formerly it rose imposingly 148 feet above the roof; but this altitude being now reduced by the new work to 72 feet, it appears stumpy and unfinished. The mistake thus made was more than stupid, as the persons responsible for the so-called restoration had only to turn to the neighbouring keep of the episcopal palace to find the proper battlement for the wall of the cathedral church, or if that were too plain, then to the Dominican church at Toulouse, for a coping slightly more ornate in design and a few years later in date. There can be no doubt that the original plan of a fortified church should have been carried out, in keeping with the other parts of the building, and the existing walls completed by a low battlemented superstructure, following the lines of the buttresses. The new turrets and pseudo-fifteenth-century arcade, placed on the original thirteenth-century walls, are meaningless and out of place.

Some attempt at preserving the fortified enclosure should have been made. Unhappily there was a craze some forty years ago for sweeping away from any old city church its surrounding buildings. The presence of these ancient adjuncts

had in many cases been taken into consideration by the builders. At Albi they had been specially provided in the original plan, and set forth the architectural proportions and value of the church. The treasury, the lofty walls of which united the lower to the upper porch, the charming chapel of canon Cueysse protecting the great doorway from the icy blasts sweeping over Castel-viel, the cloister with its houses for the canons, the ramparts and towers, and even the burial-ground with its memorials of six centuries, have all been pulled down and removed. As late as 1869, the old "Place aux Herbes," with its timbered houses, and the picturesque street leading from it to the gateway of bishop Dominic, were still standing, but have been pulled down since that date, thereby causing this entrance to lose all its architectural value. The porch now stands alone, projecting from the wall of the apse and united to the solitary circular tower reduced to half its former height, the sole relic left of the encircling line of ancient walls, while the raised ground within them has been removed in order to fill up the moat. Thus the great church stands solitary, despoiled of its ancient surroundings on the east and south, in the midst of a bare and vacant place, swept, indeed, but no longer garnished.

The interior is strikingly effective by its grand simplicity. Looking eastward, this immense nave with its five-sided apse presents no surface of wall-space save the lofty piers supporting the vault. The length internally is 349 feet, and the breadth 63 feet 6 inches, but the side-chapels between the buttresses increase the width of the building by 28 feet 6 inches. They are nearly square in shape (save round the apse) and vaulted, and are separated from the nave by pointed arches. Above each chapel is a lofty tribune, or gallery, lighted by the tall windows of the clerestory, and likewise opening on to the nave through a pointed arch. The tribunes are connected by narrow and low openings through the thick dividing walls. These galleries were probably protected from the nave by a low battlemented wall, before the existing balustrade of pierced stone-work was erected at the close of the fifteenth century. In the event of an enemy's forces gaining possession of the floor of the church, they could still be effectively attacked from above, as access to these tribunes could only be gained after taking by storm the two narrow spiral stairs which lead up to them, one from the sacristy, the other from the west end of the nave.

Each window of the clerestory is divided by a transom into two lancet-headed lights containing trefoil tracery. Above them the upper part of the window is filled with circular tracery containing various designs. Some fragments of magnificent stained glass of the fifteenth century have escaped destruction, and

form a wonderful contrast to the hideous modern glass which has been placed in the windows of the apse.

The whole of the interior is covered with paintings, not a single bare brick being visible.

The paintings which cover the vault (executed 1502-1512) form the greatest work of the kind ever undertaken, and are without a rival. Their preservation and brilliancy of colour are alike remarkable. On a clear blue ground, divided into compartments by the golden ribs of the vaulting, the figures and scenes depicted seem as fresh to-day as when they left the brush of the Italian artists who painted them nearly four hundred years ago.

These artists, of the schools of Perugino, Francia, and Pinturicchio, are unknown to fame save by their great work here, and they have left on it no record of their identity. A few names, inscribed on the walls of the tribunes and elsewhere, are the only personal records left behind; and these occurring where the paintings are merely patterns and geometrical figures executed coarsely and roughly, so as to be effective when seen from below, were most likely the work of apprentice hands who signed their own inferior work, while the masters engaged on the pictures of the vault have left no mark whereby they can be identified. No name or indication is to be found amid the delicate arabesques of the vault, and we shall never know who were the painters of this golden page of beauty. There is a noteworthy difference of touch in the paintings on the piers and vault at the east end of the church, and in those of the five western bays of the nave. At the death of bishop Louis d'Amboise II. in 1510, the artists must have been changed under his successor, Charles de Robertet, as the distinction of style is clearly marked between the artists employed by the former prelate, who have dated their last picture "1511," and those who took their place and achieved the whole in 1512. The paintings by the latter are inferior in drawing and colour, and coarse in comparison.

The extraordinary brilliancy and depth of the blue used by the painters of the vault has given rise to various conjectures as to the composition of this colour, but it has now been discovered from chemical analysis that their blue was made from carbonate of copper, being obtained from the precipitation of salts of copper by carbonate of potassium. For a long time it was supposed that the artists had made use of the woad, formerly cultivated on a large scale in the neighbourhood of Albi, in the preparation of their blue pigments.[a]

[a] Hippolyte Crozes, *Monographie de la Cathédrale de S. Cécile d'Albi*, 1873. Appendice, c. vii., p. 333.

The pictures of the five tribunes of the apse and the eastern vault over the choir were "restored" in 1861, by Denuelle of Paris. This work is stated to have been absolutely necessary at the time, and allowing for a certain hardness and deadness of effect by the side of the older paintings, seems to have been well executed. During the progress of the restoration an interesting discovery was made of some earlier paintings, which had been preserved under the protecting coat of plaster of the later ones. These consisted of the figures of various saints in the style of the fourteenth century, while on the vaults of the tribunes appeared the arms of Berauld de Fargis, bishop of Albi from 1314 to 1334. This prelate was a great benefactor of his church, and in his will he orders that the six chapels of the apse should be completed and adorned at his expense. Drawings of these earlier paintings were made, but it is to be regretted that they were not allowed to remain exposed, instead of being again covered by the new and tasteless designs placed over them.

On the brilliant pages of the open "book for the lay folk" depicted on the vault are various scenes from the Old and New Testaments, the prophets and types of the old law in their connection with the Saviour and the saints of the new dispensation. Here are found several personages from the "Liber Generationis Jesu Christi," the series beginning with Jechoniah; the Patriarchs and other holy men and women, with scenes from their lives; the Virtues, the Sibyls, and many Martyrs, Confessors, and Virgins; while down the centre are various groups of figures showing forth incidents recorded in the Gospels. The arrangement of the paintings is given in the Appendix to this paper.

At the west end of the nave is the earliest and largest painting in the church (49 feet high). It now covers the massive semi-circular piers supporting the tower, and before 1693 also covered the wall space between them. The subject is the Last Judgment. It was painted in oils on the brick surface about 1400—1410, and is evidently the work of a French artist, inspired certainly by Danté, and perhaps by Orcagna, though the treatment differs in detail from the existing works by that painter. A tiny door in the western wall formerly gave access to the vaulted guard-room at the base of the tower, and did not interfere with the great "Doom" which is placed above a dado at the height of six feet from the floor. At a period when Gothic art was despised, this important work suffered an odious mutilation, the central part being utterly destroyed by archbishop le Goux de la Berchère (1687—1703), when he caused the wall between the nave and the chamber in the tower to be pierced with a wide and lofty arch in order to turn the latter into a chapel dedicated by him to St. Clair, the legendary

first bishop of Albi. This act of vandalism destroyed the figure of the Sovereign Judge, the accompanying figures of attendant angels about the throne, and doubtless also those of our Lady and St. John the Baptist, who usually appear in similar representations of this subject. From the lateral portions of this vast page of medieval art which were spared, we can form some idea of the general design of the composition of the picture. The conception of the scene is intensely Gothic in feeling, and grandiose in effect. The figures bear no resemblance to the early Italian schools of painting, except in the general features of the heads, which approach nearly to the style of Giotto and his pupils. This is particularly noticeable in the same almond-shaped eyes placed too near the nose in each face, a peculiarity also common to the school of Siena. No Italian artist would have left on the north side that great dark space (a symbol of outer darkness) void of any figures to counterbalance the serried ranks of the blessed on the right of the throne. The persons prominently represented among the elect are of French nationality, the heads of Charles the Great, St. Louis and his mother, Queen Blanche, being especially fine. The idea of placing the twelve apostles side by side, seated on the same Gothic bench, and clothed alike in simple white robes is also strikingly original.

The lower part of the picture is divided into seven compartments, wherein are represented the pains of hell peculiar to each of the seven deadly sins. An explanatory inscription in old French is beneath each scene,[a] while in a band running below and forming a border the artist has repeated thrice, intending to convey thereby the despair of the damned, the touching verse adapted from the book of Ruth: *Ne vocetis . nos . Noemi . id . est . felices . sed . vocate . nos . Mara . id . est . amaritudine . plenos . Ruth . primo.* Above this predella of the torments of hell the dead are seen rising from their graves at the trump of Doom. Naked and trembling, each one holds before his or her breast the open book of the record of good and evil done during life. The Just appear on the south side; some are mounting upwards, and near them is an archangel vested in crimson dalmatic blowing a trumpet, about which is entwined a scroll bearing the word *Surgite.* Between the just and the saints seated in rows above is another scroll inscribed, *Vidi . mortuos . magnos . et . pusillos . stantes . in . conspectu . throni . et . libri . aperti . sunt . et . alius . liber . apertus . est.* Beyond the ranks of the Blessed are the twelve apostles in white, with gold nimbi, seated on a bench, and above them is a group of angels.

On the north pier is another archangel in white, with a trumpet, out of which

[a] Owen, in *Études historiques sur l'Albigeois*, by Clement Compayré, 123 *et seqq.*

proceeds a scroll inscribed, *Venite . [ad judi]cium.* He turns away from the wicked, who are rising from their graves with open books in their hands. They do not stand upright like the just on the opposite side, but sprawl down and cower away into the hell below. Above them is a scroll (now mutilated) inscribed, "*. . . . . que . scripta . erant . In . libris . secundum . opera . Ipsorum . Apocalipsis . vicesima,*" and over it is the vacant dark space crossed as by a lightning flash by a narrow wavy scroll inscribed, "*. . . . . in . ignem . eternum . qui . paratus . est . diabolo . et . angelis . ejus . matthei . xxv.*" At the top is a group of angels similar to the opposite group on the southern pier.

The upper part of this Doom was still further injured by two caryatids being affixed to its surface in order to support the projecting portion of the new organ erected over it in 1736. One of them is driven into the wall through the heads of some of the apostles.

Du Mège states that he saved this interesting painting from total destruction, and also the pictures on the vault from being repainted, in 1824, while acting as commissioner to report on the antiquities of the south of France.[a]

The paintings in the chapels come next in chronological order, but any detailed description of them would far exceed our space in these notes. A mere list indicating the most interesting paintings must suffice for the limits of this paper.

Commencing with the first chapel, east of the screen, on the north side, and proceeding thence round the building, the following summary will serve to indicate these treasures of pictorial art. The older dedications are taken from the Visitation made in 1698. In comparing these with the later ones many unfortunate alterations and consequent changes in the original decoration cannot fail to be noticed:

I.—St. George, rededicated in 1840 in honour of St. Amarand. Arabesque vault with medallion of St. George. Heraldry and inscription of the time of Louis XII.

II.—St. Christopher, now St. Carissima. Medallions on vault of SS. Cecily, Valerian, and Christopher, amid arabesques and groups of angels. Dated 1511.

III.—Bay before north door. On angles of vault the four doctors of the Western church. SS. James and Sigolena over door. Shields of bishop Charles de Robertet. Dated 1513. Facing choir on spandrels of arch, the vision of St. Joachim, and the meeting of SS. Joachim and Anna.

IV.—Entrance to sacristy. Heraldic devices of bishop de Robertet. Jacob's dream and

[a] Société Arch. du Midi de la France. *Mémoires*, vi. (1854).

Jacob building the altar. Nine figures of prophets and apostles on walls. On wall adjoining door two portraits of canons. Date 1512.

V.—Holy Sepulchre, now of the Guardian Angels (1824). Paintings on walls by an Italian artist, about the year 1500. The betrayal by Judas; Christ appearing to St. Mary Magdalene; the Cross-bearing; the Resurrection. The landscape backgrounds are very beautiful. On vault, Christ in glory accompanied by six angels holding instruments of His passion. Painting of Crucifixion on east wall obliterated by modern work.

VI.—Holy Cross, contains the finest paintings. About 1472. Two series of events on walls: in upper row the victory of Constantine over Maxentius, and its preceding scenes; in lower, the history of the discovery of the Cross by St. Helen. Costumes and armour of time of Louis XI. Two paintings on east wall concealed by eighteenth century altar-piece. Below the paintings on the north wall are life-size portraits of cardinal Jean Jouffroi and his two nephews accompanied by their patron saints. They lie buried in this chapel, the cardinal and Heliundus under a beautiful canopied tomb erected by Louis d'Amboise, his successor in the see, and Henry in the ambulatory just outside. The effigies in marble were destroyed at the Revolution, and in their place now stands the fine statue of St. Sebastian of early sixteenth century workmanship removed from his chapel in the nave. In the spandrels facing the choir are medallions of St. Helen and Constantine.

VII.—SS. Michael and Martial. Paintings 1473-1510. On vault figures of SS. Michael, Raphael, and other angels. An angel on each of the four walls in "grisaille."

VIII.—SS. John Baptist and John Evangelist. Paintings of the appearance of St. Gabriel to Zachariah, the baptism of Our Lord, St. John reproaching Herod, Salome demanding his head; the condemnation of the Evangelist by Nero, his martyrdom at the Latin Gate, and his assumption by angels. All have been ruined by repainting.

IX.—St. Mary Major (the central chapel of the apse), disfigured by stucco work of the year 1777, behind which the original paintings probably remain, together with the work erected in 1493 by Louis d'Amboise, who was buried here.

X.—SS. Peter and Paul. Early sixteenth century paintings emblematic of the Church and St. Peter's headship thereof, and the Sacrifice of the Mass. Many inscriptions in Greek and Latin explain the various scenes depicted. On the walls are the calling of Peter and the conversion of Paul, each in two compartments. Over the altar the condemnation of the two apostles by Nero.

In this chapel is a fine oil painting by Blanchard, signed and dated 1628, representing the infant Christ on the knees of His Mother delivering the keys to St. Peter. This is the only movable picture of any value in the church.

XI.—SS. James Major and Minor, now to St. Diogenian (1833-1843). Beautiful paintings of the school of Pinturicchio, representing SS. James the Great, James the Less, Philip and Simon. Arabesques on vault with arms of d'Amboise.

XII.—Our Lady of Pity, now St. Bartholomew. The heads of the Blessed Virgin and St. Gabriel appear above the modern picture over the altar. On the west wall is the tomb of Our Lord with an angel seated on it, and the holy women bringing spices to embalm His body. Figures of

SS. Martial, Katherine, Mary Magdalene, and Salome in "grisaille." Arms of d'Amboise on vault and in window.

XIII.—SS. Lawrence and Faith, now dedicated in honour of St. Francis of Sales. Paintings of St. Lawrence above altar (now concealed by modern picture) and on west wall of St. Blaise. At sides of window figures in "grisaille" of SS. Cecily and Valerian. Arabesques and arms of d'Amboise on vault.

XIV.—Our Lady of Pity and St. Stephen. Very interesting paintings, untouched and now in ruinous condition, of the Mother of Sorrows over altar, St. Stephen on south wall, and St. Mametus on west wall. Vault, with medallion of the Almighty amid arabesque work, dated 1510. Above the altar stands an early sixteenth century figure of the "Ecce Homo" carved in wood, probably removed from the nave. On spandrels of arch, facing the choir, are medallions containing (1) St. Veronica holding the napkin, whereon is depicted the face of Our Lord; and (2) An angel holding a label inscribed, *Salve Sancta Facies.*

XV.—The three Kings, now St. Francis of Assisi. Coarsely painted designs, containing symbols of evangelists with inscriptions, the planets, etc. Dated 1512, and signed IOĀ FRĀCISCVS DONEIA | PICTOR ITALVS DE | CARPA FECIT.

XVI.—SS. Salvy, Amarand, Sigolena, Carissima, and Martiane, the five saints of the diocese. Now used as receptacle for chairs. Medallion containing figure of St. Michael on vault, and inscription on cornice from Graduale of Mass on May 8. On pilasters the signs of the zodiac. Painted by Doneja, and signed as XV.

XVII.—St. Radegonde, whose half figure appears in medallion of vault. Dated 1514. Now desecrated.

Passing through the south door of the rood-screen, the first bay west of it is occupied by the great doors of the southern portal. The altars in the chapels of the nave were placed against the exterior walls, and not orientated.

XVIII.—All Saints, rededicated in honour of St. Loup after the destruction of his church in Castelviel. The paintings have very effective architectural designs, containing figures of SS. Andrew, George, and Luke, and half-figures in medallions of SS. Augustine, Francis of Assisi, and Helen on the east wall; and on the west SS. James the Great, Roch, and Jerome, and medallions of SS. Dominic, Peter Martyr, and a female saint. All have been coarsely repainted. There are probably other paintings behind the huge classic reredos.

XIX.—St. Sebastian, now St. Pius V. Geometrical patterns.

XX.—St. Bartholomew, now St. Stephen. An interesting painting (by a Burgundian artist?) was uncovered in 1872 on the south wall. It represents Christ dead on the cross, accompanied by figures of David, Solomon, Isaias, and Zacharias, holding scrolls inscribed with their prophecies. Above the cross two angels support a four-lined inscription. These scrolls are all in Gothic characters. On western wall, St. Ursula and nine virgins, opposite St. Paul on the east. A figure holding scourge in medallion on vault.

XXI.—Holy Innocents, now St. Lawrence. Group of children on vault. Date 1513.

XXII.—The three Marys, now a lumber-room.

XXIII.—The chapel under the tower, dedicated in honour of St. Clair in 1700, with paintings of that date, now contains choir organ.

XXIV.—Never dedicated, now walled up.

XXV.—Early dedication not known. Chapel of the Crucifix when XX. was rededicated in honour of St. Bartholomew. Now to St. Martiane.

XXVI.—SS. Cosmas and Damian, who appear on spandrels facing nave. Now to Our Lady of the Rosary. Altar-piece removed from chapel of St. Clair (?).

XXVII.—SS. Margaret and Amans, now to Sacred Heart. Vault dated 1513.

XXVIII.—St. Anthony, now St. Joseph. Two medallions of SS. Anthony and Roch.

XXIX.—Bay containing north door, walled up. Paintings of eighteenth century.

These four chapels on the north side of the nave have been "restored" and spoilt.

The choir was inclosed about the year 1485, during the episcopate of Louis d'Amboise I. and its walls were built by one of those wandering companies of "workers in stone" who travelled over Europe, offering their services to the various princes and prelates. These, when in need of such workmen, gladly had recourse to their talents and artistic training.

The various associations issuing from the school of masons at Strasburg, during the fourteenth and fifteenth centuries, formed separate schools until they were united into a sole corporation at a general meeting of their members held at Ratisbon, about the year 1452, by Jodocus Dotzinger of Strasburg, who established the "Confraternité de Tailleurs de Pierre" as a distinct body from the masons.[a] One of these companies of sculptors existed in the fifteenth century at the Court of Burgundy, where their works united the tendencies of the artistic schools of France and Flanders with a strong mingling of German feeling. The choir of Albi was evidently designed and erected by members of this Burgundian school, as the details and statues bear a close resemblance to similar work at Dijon. Their work here is without doubt the richest specimen of the most exuberant period of flamboyant Gothic architecture in existence. Erected at a date when this style in France was still uninfluenced by the Renaissance revival of Italy, it has been preserved most fortunately to the admiration of posterity as a specimen, almost intact, of the religious art of the closing years of the fifteenth century. The admiration it excited in cultured minds saved it from destruction during the devastations committed at the Revolution, as well as from the more cold-blooded vandalism of the present age, when it was actually proposed by the newly restored ecclesiastical authorities to sweep it away entirely! The white

[a] Didron, *Annales Archéologiques*, viii. 185.

chalky stone, of which the screens are built, is soft when newly extracted from the quarries at Lombers, ten miles from Albi, and so lends itself to easy cutting, but after exposure to the air rapidly hardens. It is to this facility of carving the stone that we owe the multitude and variety of minute details in the screens. The eye never wearies of examining the graceful design, the beauty of moulding, the lace-like decoration, and the realistic statues which adorn the walls.

The rood-screen stretches across the church from wall to wall, and is pierced by three doors, the central one giving access to the choir, and the others to the rather narrow ambulatories between the side screens and the chapels. There are also two side entrances opening on to the presbytery, which have preserved their original wooden gates with their exquisitely carved locks.

The width of the rood-screen is 23 feet in the centre, where a vaulted porch divided into three bays stands before the entrance to the choir. There are no traces of altars at the sides of this doorway, though there is space on either side under the vaulted canopy for a small altar. The pendent keystones and details are of great beauty and richness here. Immediately within the portal two small doors, most elaborately carved, open on the staircases leading to the top of the screen. This gallery was used by the singers.

In 1792 all the statues on the western side of the rood-screen were removed or destroyed, save those of Adam and Eve, who found favour in the eyes of the republican clubs to whose use the nave was given up, the choir only being reserved for the "constitutional" services. The screens inclosing the latter would have been demolished also, if the local authorities had not been prevented by an order from the Minister of the Interior (9th December, 1792). The town council, however, resolved that the altars and font in the nave should be swept away, and the paintings on the vault effaced, as unworthy of the temple of Reason. Owing to the expense of erecting scaffolding for the purpose of whitewashing the vault the latter design was not carried out.

The great rood of gilded bronze had been already destroyed. It was suspended from the roof by an iron chain, ornamented at intervals with bronze globes. Through the midst of one of these balls was an horizontal aperture so adjusted that at the seasons of the two equinoxes the first rays of the morning sun shining through the window of the tribune over the central chapel of the apse passed through this opening and shone on the western wall of the nave.

The present crucifix is poor in design and far too small for its position. The old statues of SS. Mary and John have been placed beside it, and some smaller

figures restored to the niches; but fifty vacant pedestals show the number of statues wantonly wrecked.

Above the door of the south portal leading into the ambulatory, on the eastern side, is one of the finest pieces of sculpture in the church. The scene represented is the Annunciation, and it is treated in an original manner.

In the screen enclosing the choir and presbytery are thirty-five bays filled with elaborate tracery, which is open in the thirteen bays east of the stalls. Against the dividing columns are statues representing the prophets and other characters from the Old Testament. They are painted and gilt, and stand about 4 feet 7 inches in height. These figures are excellent examples of flamboyant art. Their draperies are carefully studied, even in the most minute folds; and the expression of their faces and the action of their hands are extremely realistic. Most of them hold scrolls inscribed with texts, by which it is easy to identify them when the name does not appear on the pedestal.

On entering the choir by its western door two small angels will be found in niches against the innermost arch moulding. These are the sentinels of the angelic host within, who line the walls on either side, as well as the eastern side of the rood-screen. In their midst over the doorway and facing the altar is the beautiful statue of St. Cecily crowned with lilies, and holding organ and palm, the gift of Charles de Robertet (1510—1515). Her eyes are closed, and the head is bent slightly backward as if listening to the heavenly chorus of the angelic host surrounding her. All these angels bear scrolls, two or three of which have the sacred monograms of Jesus and Mary on them; one only has the words "Gloria in Excelsis" on his scroll. On the south side of the choir are thirty-two stalls in all, five of which face eastward, and in the lower row twenty-seven, three of which are returned. At the east end on this side is the archiepiscopal seat placed in a semi-circular recess, and over it a stone canopy. The old statues are gone from the niches at the side, but new ones of the four doctors of the Latin church, all very short and portly personages, have been put up in their place. The stone desk of the archbishop's seat is turned to the altar. On the north side are thirty-three stalls, and twenty-eight below them in the lower rank. The returned stalls are the same in number as on the south side. Behind each stall, above its wooden back and between the angels, is a panel painted alternately red and black, and covered with arabesques and small angels. These panels have the appearance of stamped leather, and are very rich in effect. Above each is a shield just below the canopy of the stall, painted originally, but now defaced.

All the wealth of carving has been lavished on the stone work, so the wooden portion of the stalls is quite plain and simple in design.

The old pavement of oak, inlaid with the brasses and monuments of the bishops buried here, was ruthlessly torn up in 1831, and a new floor, composed of black and white marble lozenges, laid down, the glaring effect of which is out of harmony with the sombre grey tones of the old stone screens now mellowed by time.

Figures of the emperors Constantine on the south, and Charles the Great on the north, crown the side entrances. In the centre of the open tracery above the doors is the shield of d'Amboise supported by stags, and in the spandrels the monograms of Jesus and Mary. Five steps lead up to the sanctuary, round which are grouped the apostles and St. John the Baptist, with Our Lady in the centre of the eastern bay. These statues are placed against the piers in positions similar to the prophets at the outer side. The apostles have their emblems, and hold scrolls inscribed with the twelve articles of the Creed. St. Paul has the opening verse of his Epistle to the Hebrews, and St. John Baptist "Ecce Agnus dei, etc." The article of the Creed appropriated to each apostle corresponds with the text held by the prophet who stands outside the same pier [*e.g.* St. Jude's article, "Carnis resurrectionem," is equivalent to the text in the hand of Daniel, "Educam vos de Sepulchris," while Jacob, who is on the outer side behind St. Paul, bears "Non auferetur sceptrum de Juda et Dux de femore ejus donec veniat qui mittendus est." St. John Baptist stands on the left hand of Our Lady, and St. Paul on her right, thus occupying the place of honour. "This precedence of St. Paul over St. Peter, in his quality as the youngest member, the Benjamin, as it were, of the apostolic college (having been added by Christ to the original twelve chosen by himself) is the final echo of a tradition which is found throughout the middle ages."[a]

Under the statue of Our Lady stood originally a small altar, which has now disappeared, but its site is marked in the pavement.

The magnificent high altar erected by Louis d'Amboise I. was destroyed at the Revolution. It stood at least the distance of one bay westward of its successor, an ugly erection of the early years of this century and out of all proportion with the presbytery. The only relic left of it is a wooden panel, which served as an occasional frontal to the altar-shelf. This is painted in oils, and contains an

[a] Mgr. de Montault, in *Revue de l'art Chrétien*, 1887, p. 356.

early sixteenth-century representation of the Last Supper, with figures of St. Geneviève of Paris and a bishop at the ends. The length of this predella proves that the old altar was about two feet shorter in length than the present one.

The splendid metal work of silver and bronze, with which the sanctuary was adorned by Louis d'Amboise in 1485, was taken to the mint and cannon foundry in 1792.

Three independent records, viz. the archives in the *Bibliothèque Nationale* (Fonds Doat. vol. 112), the Procès-verbal of the Visitation of the cathedral church and chapter in 1698 and 1699, by Charles le Goux de la Berchère, archbishop of Albi,[a] as well as the Procès-verbal drawn up by the Commissioners in 1790, contain minute descriptions of these beautiful works of art, and enable us to form some idea of the precious ornaments which furnished the choir and presbytery before the Revolution.

The bishop who thus so magnificently adorned his church, besides bequeathing to it his valuable library, died in 1502; and the vile taste of one of his successors led him to destroy (or conceal with stucco), in 1779, the monumental effigy, and deface the humble tombstone covering the grave of that great prelate.

This was, however, only a prelude to the work of alteration and mutilation which has been carried on during this century. The old choir is now no longer used for Divine service. Since 1882, an enclosed space has been raised at the west end of the nave, and a new high altar placed under the organ. Beneath it lies, behind a glass frontal, a copy, in coloured plaster, of Maderna's celebrated statue of St. Cecily. She here appears in a green robe and yellow turban, and is altogether a charming example of modern ecclesiastical French art.

[a] Published at Tours in 1877 by the Baron de Rivières from the original document.

To follow page 112.

APPENDIX.

The following is the arrangement of the paintings on the vault of the nave of the church:

St. Bartholomew — St. James Minor
St. Jude — St. Simon
Eagle — Christ in Glory — Angel
St. Matthias — Jerome — Gregory — St. Matthew
Lion — Ox
Adam — Augustine — Ambrose — Eve
Temperance — Prudence
Nahum — Simeon — Ezekiel — Prophet
Jonah — Isaac — Abraham — Prophet
Justice — Fortitude
St. Joseph — Coronation of Our Lady — St. John Baptist
Sacrifice of Isaac — Story of Susannah
Parable of the Ten Virgins
St. Joachim — St. Anne
Charity — Faith
Sibyl Phrygia — Hosea — Daniel — Sibyl Persica
Agnus Dei
Sibyl Libica — Haggai — Habakkuk — Anna
Humility — Hope
St. Valerian — St. Cecily
Isaiah — Micah
St. Paul — St. Peter
David — Zacharias
St. Tiburce — St. Agatha
St. Katherine — St. Mary Magdalene
David — Annunciation — St. Augustine
Tubal Cain (Music) — Theology
St. Genesius — Coronation of St. Valerian and St. Cecily — St. Paul
St. Margaret — St. Apollonia
St. Louis of Toulouse — St. Louis K.
Tobias — Methuselah
Arabesque — Arabesque
Elisha — Nephthali
St. Martial — St. Salvi
St. Barbara — St. Ursula
Joseph — Jacob
IHS
Arabesque — Arabesque
PAX
Moses — Jonah
St. Veronica — St. Agnes
St. Roch — St. Sebastian
Transfiguration of Our Lord
Heads of Saints — Heads of Saints
Christ appearing to
St. Martin — St. Thomas — St. Christopher
St. Liberata — St. Anastasia
Jechoniah — Shealtiel
Arabesque — Arabesque
Zerubbabel — Abiud
St. Martha — St. Mary of Egypt
St. Urban — St. Silvester
Eliakim — Azor
Arabesque — Arabesque
Achim — Sadoc
Job — St. Anthony
St. Katherine of Siena — St. Clare
Eleazar — Eliud
Arabesque — Arabesque

V.—*The Vases of Magna Graecia.* *By* Talfourd Ely, *Esq.*, *M.A.*, *F.S.A.*

Read January 31, 1895.

When we reflect on the grandeur, wealth, and power of the numerous representatives of Hellenic culture that caused a considerable portion of Italy to be called a greater Greece,[a] we can hardly fail to be struck with the scanty knowledge we possess of their political and social history.

Here and there an allusion in Herodotus,[b] a few words from Diodorus or Polybius, a doubtful story in Athenaeus, only whet our appetites to learn more of the proud communities that threatened to eclipse their parent Greece.[c]

Were it not for the imperishable beauty of her coinage what should we know of Terina? The "golden harvest" dedicated at Delphi by the Metapontines is commemorated by the staters of their city; but the traveller who now alights at the station of Metaponto finds the harvest has usurped the place of the city. "Perierunt etiam ruinae!" In the second century of our era Pausanias wrote, "In my time, except a theatre and the circuit of a wall, nothing is left of Metapontion."[d] Wall and theatre have now followed the rest, and the scanty

[a] Polybius, ii. 39, *ἐν τοῖς κατὰ τὴν Ἰταλίαν τόποις, κατὰ τὴν* Μεγάλην Ἑλλάδα *τότε προσαγορευομένην*; Livy, xxxi. 7, Tarentini . . . oraque illa Italiae, quam Majorem Græciam vocant; Ovid, *Fasti*, iv. 64, Itala nam tellus Græcia Major erat. As to the origin of the epithet, see Athenaeus, xii. 523, e.

[b] *e. g.* in vi. 127, the mention of Smindyrides as pre-eminent among the gilded youth of Sybaris.

[c] According to Heraclides Ponticus (quoted by Athenaeus, xii. 522 a) the Sybarites set up an opposition to the Olympic games.

[d] Paus. vi. 19, 11. *Cf.* F. Lenormant, *La Grande-Grèce*, i. 133, "Métaponte est un désert et on y arrive par le désert." So Cicero speaks of *Magna Græcia* generally, "Quae nunc quidem deleta est;" *De Amicitia*, iv.

vestiges of two temples are all that remain to bear witness to the glories of a city which sheltered Pythagoras in his declining years, and where Cicero gazed on the sage's tomb.

It is much the same with other Hellenic offshoots. Constantinople and Smyrna, Marseilles and Naples still flourish indeed, thanks to an exceptionally favourable position; but the vast majority [a] of Greek colonies, through changes in the great routes of trade, are now "vox et praeterea nihil." Tarentum, as Professor Kirchhoff has remarked,[b] was the natural agent of Hellenic civilisation for the Calabrian peninsula. But modern Taranto, in spite of the railway and the Italian fleet, strikes the passing traveller as a city of the dead. The street is narrow, so that the lofty old houses may keep out the blazing sunshine; there is nothing to tell of progress, except advertisements of English manufactures; the priests chat quietly in the cathedral church, which is dim with incense; almost the only movement I noticed there was that of a funeral procession, and even this moved slower than in more bustling lands.

Yet ancient Tarentum must have been a busy place, with her trade, and wealth of olives, wine, and wool. Still richer, perhaps, was her harvest of the sea, the *murex*, yielding the famous purple dye, found in prodigious quantities in the *Mare Piccolo*, a landlocked harbour, upwards of sixteen miles in circuit, which made Tarentum the one safe refuge in the otherwise harbourless gulf. The shells of the *murex* lie in masses near the harbour and the ancient city.

A more interesting deposit is that of the terra cotta images, and the moulds for making them. These have been found in thousands; and Mr. Arthur Evans has given, in the Journal of the Hellenic Society,[c] a valuable account of his researches with regard to them.

For our present purposes, however, another phase of Tarentine industrial activity is more important, the making of painted vases; for to Tarentum are generally ascribed those Apulian vases which have as an ornament rows of fish and other marine objects, a decoration quite appropriate to a chief harbour of southern Italy.

This extremity of Italy is less known to us than other parts. It is "nobody's way nowhere." The stream of English, ever flowing eastward, turns off at

[a] There is no complete list of the Greek colonies, but, according to Pliny, Miletus alone founded over ninety: "Miletus . . . super nonaginta urbium per cuncta maria genetrix."—*Nat. Hist.* v. 31.

[b] *Studien zur Geschichte des griechischen Alphabets* (4th edition), 156.

[c] VII. 1.

Brindisi, and from there I have travelled westward round the coast to Metapontum, Paestum, and Naples without meeting a single Englishman.

How many of this learned audience are aware that Greek is even now the language of some isolated communities in the toe and in the heel of Italy?[a] Such is the case near Reggio and Otranto;[b] and it would be pleasant to imagine that we have here an unbroken chain of speech reaching back to the discourses of Pythagoras. But the philologists will have none of this, nothing is sacred to a philologist, and they tell us that this Greek "did not take its origin in Southern Italy, ... from the ancient Greek of *Magna Graecia*, but simply from the modern Greek of Greece";[c] or rather (as Mr. Tozer points out[d]) from the medieval Greek.

In like manner the vases of Southern Italy are little known or cared for. Students of ceramics turn their attention to early forms, as the Mycenaean, or the Geometric, or, at all events, to the pottery of Greece proper, and especially to Attic ware.

A weighty authority, M. Saloman Reinach, has recently remarked, "il est rare aujourd'hui de trouver dans un recueil savant la gravure d'un de ces vases italo-grecs qui faisaient la joie d'un Hamilton ou d'un Tischbein, et qui ont encore bien des choses à nous apprendre."[e]

This neglect of works of the decadence may, as M. Reinach remarks, have gone too far, and it may be reasonable to expect a reaction, though, as yet, it must be confessed, there are no signs of it. Till the great discovery of the Etruscan graves at Vulci,[f] a discovery that marks an epoch in the history of archaeological science, the vases of South Italy formed the staple of publications on ancient ceramics.

Such publications as, *e.g.* Passeri's *Picturae Etruscorum*, or the *Serie di Trecento Tavole*, published at Rome in 1787, have, however, little scientific value; and,

[a] Mr. H. F. Tozer, in the *Journal of Hellenic Studies* for 1889 (x. 11), states that there are still "twenty thousand persons in the South of Italy who speak Greek as their native tongue."

[b] See "Linguistic Islands," by Prince L. L. Bonaparte, in the *Transactions of the Philological Society*, 1888-90, p. 339.

[c] *Ibid.* 363, where reference is made to the treatises of Professors Comparetti, Morosi, and Pellegrini.

[d] *Journal of Hellenic Studies*, x. 37. Mr. Tozer concludes (p. 42) that "the Greek-speaking population of South Italy . . . are the descendants of the Byzantine Greeks, who migrated thither not later than the eleventh century."

[e] *Peintures de vases antiques*, Introduction, pp. ix. x.

[f] In 1828. See Gerhard's "Rapporto Volcente," in *Annali d. Inst.* iii. 5.

with the exception of Gerhard's *Apulische Vasenbilder* (published as far back as 1845), Furtwängler's text to Genick's *Griechische Keramik*, and Lau's excellent work with its valuable text by Brunn and Krell, we have little literary help in our endeavours to form a judgment as to the ceramic art of the Italian Greeks.

As M. Reinach has observed,[a] the study of painted vases has passed through three stages, the artistic, the exegetical, and the historical, and they are now treated as monuments of the history of art. We no longer look to them for moral guidance, or find on them, as Millin did,[b] "des allégories qui rappelaient, à ceux à qui on donnait ces vases, les exemples qu'ils devaient suivre et les actions qu'ils devaient imiter!"

How far such explanations may be carried may be seen in Kirk's *Outlines*,[c] where Plate 36 is described as representing Volumnia, Hersilia, and Valeria, though one of the three figures is obviously male!

Without going to these depths of absurdity we may find much in these vases beyond and apart from mere beauty of form. For instance, the representations upon them must be of interest to all who care to gain a notion of the habits and thoughts of communities whose history has almost perished.

The bulk of such representations may be grouped under two heads, which are of special value: firstly, as placing before us the views once prevalent as to a future life, and, secondly, as giving us an idea of the drama of the day. These two groups may not really be so completely disconnected as they at first sight appear.

The former comprises scenes obviously appropriate to a class of objects such as painted vases intended for dedication in temple or tomb.

As to the second, we must not forget that the drama was under the direct patronage of Dionysos. It originated in his worship, and the theatre was actually a temple of the god, a fact that seems no doubt strange to the average Englishman, in spite of his miracle-plays of the middle ages, and his guild of Church and Stage of the present day. But Dionysos was an important factor in the problem of a future state, and never more so than in the Hellenistic age to which this ware belongs. Scenes had indeed been borrowed from the comic stage at an

[a] In his introduction to *Peintures de vases antiques*, p. vii.

[b] *Ibid.* 3.

[c] *Outlines from the Figures and Compositions upon the Greek, Roman, and Etruscan Vases of the late Sir William Hamilton.*

earlier date, as, for instance, the actors with bird-masks on a black-figured amphora at Berlin,[a] and an oenochoe in the British Museum.

Closely akin to these comic scenes are those Boetian *scyphi*[b] recently discovered in the Kabeirion near Thebes, which were evidently intended as deliberate caricatures of the popular mythology. These comparatively early vases, however, caricature only Dionysos with his noisy and not very reputable crew, or a mortal Odysseus, or a third-rate immortal such as Kirke.

Aristophanes, indeed, might introduce in the theatre his deities in every sort of unbecoming predicament; but I hardly think that in his day or earlier the Greeks would have tolerated the presentment of such profanities in painting or sculpture. Yet on the Italian vases we find not only the humbler classes of supernatural beings exhibiting their weaknesses in a most undignified manner, but even the most blue-blooded Olympians, such as Zeus and his consort Hera.

Thus, in the British Museum[c] we have on a crater (F. 269) the contest of Ares and Hephaistos carried on in bombastic style under the divine nose of their unlucky mother; while another crater (F. 150)[d] bears a most realistic representation of Zeus clandestinely climbing up to Alkmene's window, and Hermes on the *qui vive* below. These vase-pictures are a reflection of the φλύακες, a speciality of *Magna Graecia*, and above all of Tarentum. Such farces have little to do with Aristophanes and the Athenian stage. Their origin is ascribed to Rhinthon; and they belonged to the third century, when the festivals of Dionysos were at their height in southern Italy.[e] Nor are there wanting more serious dramatic situations drawn from the tragic stage, as that of Iphigenia,[f] or of Alkmene, on the famous crater painted by Python, now in the British Museum.[g]

[a] No. 1,830 in Furtwängler's *Beschreibung*. For illustrations see Mr. Cecil Smith in vol. ii. 309, and Mr. A. S. Murray in vol. vii. 54, of the *Journal of Hellenic Studies*.

[b] Now in the British Museum, in wall-case 7 of the Second Vase-room. For further details see Mr. Walters in *Journal of Hellenic Studies*, xiii. 77-78, and M. Reinach in the *Gaz. des Beaux-Arts* for March, 1894. For a later Theban cup at Oxford, with Boreas and Odysseus, see Prof. Gardner, *Museum Oxoniense*, p. 18 and pl. xxvi.

[c] Fourth Vase-room, wall-case 69.

[d] *Ibid.* wall-case 72.

[e] See Heydemann, *Die Phlyakendarstellungen auf bemalten Vasen*, Jahrbuch d.Inst. i. 260-313. *Cf.* Jahn's *Einleitung*.

[f] See *Arch. Ztg.* for 1849, Taf. 12. Euripides was the favourite source, and he is said himself to have been in his youth a painter. See Vogel, *Scenen euripideischen Tragödien in griechischen Vasengemälden*, pp. 6 and 7.

[g] Fourth Vase-room, wall-case 18 No. F. 149. See Mr. A. S. Murray, in *Journal of Hellenic Studies*, xi. 225-230, plates vi. and vii.

Returning to our first group, the group directly referring to death and future life, we must place in the foremost rank those vases, unfortunately few in number, which set before us a view of the abode and condition of the dead, as the famous Orpheus vase from Altamura,[a] or the still more splendid vase found with two others in a grave at Canosa, and now in Munich.[b]

Less ambitious than these compositions are the pictures that represent simply the sepulchral *stelae*, with figures, often females, bringing libations to the tomb. A more striking delineation of this cult of the dead is seen in the *heroon*, the favourite subject of the Italiote artist. How popular a type this was may be understood from the fact that in Heydemann's catalogue of the Naples collection alone there are no fewer than sixty-five entries under the head "Grabmal (in Tempelform)."[c]

In this type appears the Italian taste for architectural display which manifests itself also, though less frequently, in the representation of temples and palaces, and may be compared with the Pompeian fashion of wall-decoration in the second or architectural style.'[d]

The Hellenistic age was, no doubt, fertile in novelties of building as well as of other arts; but this fondness for pillared halls may most readily be explained (as von Rohden has observed[e]) by reference to a scenic prototype.

Such love for display of architectural forms, often fantastic enough, is a prominent feature in the chief class of south Italian ware, the Apulian.

The other two classes recognised, the Lucanian and the Campanian, are of less importance. The Lucanian includes one form of vase peculiar to itself, a clumsy imitation of bronze with discs on the handles.[f] Though this form is at this late period peculiar to the Lucanian class, it is really a reversion to an older type, such as may be seen among the archaic vases in the First Vase-room of the British Museum,[g]

[a] *Monumenti inediti Inst. di Corr. Arch.*, viii. 9.

[b] No. 849 of Otto Jahn's *Beschreibung*. *Cf.* Baumeister, *Denkmäler*, p. 1928, and pl. lxxxvii. It is given in colour by Lau, *Die griechischen Vasen*, pl. xxxv.

[c] *Die Vasensammlungen des Museo Nazionale zu Neapel, beschrieben von H. Heydemann.*

[d] See Mau, *Geschichte der decorativen Wandmalerei in Pompeji*, p. 124 foll. Pl. iii.-ix.

[e] In Baumeister's *Denkmäler*, p. 2006.

[f] See Lau, *Die griechischen Vasen*, pl. xlii. 1. c; Genick, *Griechische Keramik*, pls. viii.-x. On one such vase in the British Museum (F 175 in the Fourth Vase-room) there is a picture of a vase of the same make.

[g] No. 315 in wall-case 55. *Cf.* Furtwängler's "Apulische-geometrische Gattung," No. 276, and Form 14 in his *Beschreibung*. Prof. Gardner seems not to think them so early. See *Museum Oxoniense*, p. 3; and No. 83, fig. 8, on p. 4.

just as in the Apulian crater we get back, as Mr. Cecil Smith has remarked, to the old oriental style of the frieze.[a]

The Lucanian style of painting is distinguished by large heads with staring eyes, and the arrangement of hair in black masses, by ungraceful pose, by awkward drapery, by sparse use of ornament and of bright colour; though in this and other respects one artist stands out above his severer brethren, Assteas, one of the three Italiote vase painters who thought their work worthy of their signatures.[b]

The Berlin crater signed by Assteas came from Nola, and Furtwängler places it in the late Campanian class. On the other hand low comedy, such as is represented on that vase, was specially connected with Tarentum, and Assteas signs also in letters connected with that city. But Heydemann[c] describes a vase of Assteas, now in the Naples Museum,[d] as having been found at Paestum, *i. e.*, in Lucania, though certainly not far from the Campanian boundary. Another vase painted by Assteas with the frenzy of Herakles was found at Paestum. There is often a difficulty in deciding the exact domicile of a vase-painter, and we may sometimes confess "*Lucanus an Apulus anceps.*"

Of Campanian ware the most interesting feature is the fondness for the simplicity and graceful lines of the so-called Nolan amphora.[e] Conspicuous too are the black vases from Capua, like elegant ladies richly dight with tastefully wrought necklaces of gold.[f] In these, as in so many other classes of pottery, we may trace the influence of metal technique.

By far the most important of the three schools of Italiote ceramics was the Apulian; and it is interesting to find that even now Apulia in some fashion maintains her reputation in this department. "At the present day," writes Mr. Arthur Evans, "the East Adriatic ports obtain their pottery almost exclusively from the Apulian coast."[g]

The leading characteristics of Apulian ware are great size, some Apulian

[a] *e.g.* on F. 278, Pedestal 12, in the Fourth Vase-room, the Death of Priam, and the meeting of Menelaos and Helen at the taking of Troy.

[b] See Von Rohden, in Baumeister's *Denkmäler*, p. 2007. The others who signed were Python and Lasimos (Jahn, *Einleitung*, ccxxxi.).

[c] *Humoristische Vasenbilder.*

[d] No. 2473 of Heydemann's Catalogue. It represents Herakles and the Hesperides.

[e] See pls. i. and iii. of Genick's *Griechische Keramik.*

[f] There are some fine examples of this class (dating from the last half of the fourth century) in the Third Vase-room of the British Museum, cases 17 to 24.

[g] *Archaeologia*, xlviii. 45.

vases are considerably over three feet high;[a] lavish abundance of ornament, scattered over every part; free use of colour, especially yellow and white; adoption of plastic accessories, such as medallions on the handles; imitation of metalwork, both cast and wrought. Occasionally a darker yellow is used for the shading of a shield.[b] So far were these show-vases from being intended for actual use that some of them absolutely have no bottom. They are carelessly made, the black glaze no longer possesses the beautiful Attic brilliancy. As a rule it was not thought advisable to increase the size of the persons represented in proportion to the increased size of the vase,[c] so successive rows of figures were introduced, one above another; while a public building or a sepulchral monument often extended through more than one of such rows, so as to form a centre round which the figures might be grouped. This architectural focus, generally painted white, and often touched up with yellow, produced a pictorial effect, which was heightened by the re-introduction of the dark red employed by archaic artists, but for the most part abandoned by those of the finest style.[d]

Beyond these polychrome decorations, others of actually plastic nature came into use. While the restrained and statuesque character of the older vase pictures was degenerating into confused grouping of many-coloured forms, clay mouldings were added in the shape of medallions representing faces; and the heads and necks of swans, moulded in clay in imitation of bronze casting, were placed on the shoulder beside the handles. A good example of this treatment will be found in the large crater on a pedestal (No. 9) in the Fourth Vase-room at the British Museum. An imitation of this vase, by Wedgwood, is to be seen in the Museum of Practical Geology in Jermyn Street, but the imitation is not a very happy one.

The architectural tendency of the representations on these Apulian vases is enhanced by the cornice-like lip; while their excessive size makes the foot seem too weak for its burden; and in fact the body of the vase does not sink into and

[a] Some of the vases in the Koller collection at Berlin are 3 feet 5 inches high, or, with the handles, 4 feet; *e. g.* No. 3,258 of Furtwängler's *Beschreibung*. See O. Müller, *Anc. Art*, 301, 1.

[b] *e. g.* in the British Museum, Fourth Vase-room, on an Apulian amphora, F. 335, in wall-case 15; also on a kelebe, F. 297, in wall-case 48.

[c] Yet compare the figures of athletes, about a foot high, on the reverse of the Lucanian amphora, F. 184, on pedestal 7 in the Fourth Vase-room.

[d] See Section 11 of Brunn and Krell's introduction to Lau's *Die griechischen Vasen*, and Taf. xxxv.

closely unite with the foot, as it always does in Greek pottery of the best period.[a] There is a striking difference between the rich decoration of the upper portion and the baldness and poverty of the lower.

As to the subjects represented we may note the frequent substitution of a bust for the whole figure; while in the bands of ornament a female face often forms a centre.

The *heroon* I have already mentioned as a leading feature in Apulian vase-painting. Sometimes the building stands empty:[b] sometimes it is tenanted only by a plant,[c] or a vase;[d] on a crater in the Britith Museum[e] it forms a canopy for a statue of Leda with the swan. As a rule, however, it is occupied by at least one person,[f] often female, but more frequently male, not seldom accompanied by the horse,[g] the characteristic attendant of the heroic dead on sepulchral *stelae*.

The most dramatic, perhaps, of these representations is that on an amphora, published by Passeri,[h] where a warrior holding a spear rushes into a shrine in which another warrior is lying dead at the foot of an altar crowned by a vase. It is observable that in most of these cases the principal personage, presumably the dead man himself, is represented as young, as is the case for the most part with the mummy portraits in the National Gallery[i] and elsewhere. A question naturally arises, Is this simply conventional? Does the defunct appear in heroic and immortal youth? Not always, assuredly; for we find in the British Museum[k] a bearded man in an *heroon*, and Genick, in his *Griechische Keramik*, Pl. VI, has, on a fine red-figured Apulian amphora, a bald-headed player on the lyre. As a rule, however, we may undoubtedly trace in these works of art the operation of that tendency of the Hellenic mind to give youthful features to all, and to strip Dionysos and Hermes of the archaic beard once worn even by Apollo himself.[l]

[a] Compare the section of an amphora in Pl. xxxv. of Lau's *Die griechischen Vasen* with that in Pl. viii.

[b] As on two amphoræ in Passeri, *Picturae Etruscorum*, plates 264 and 265.

[c] *Ibid.* plates 143 and 182.

[d] *Ibid.* plate 272.

[e] Fourth Vase-room, wall-case 22, No. F. 286.

[f] On an amphora in Passeri, *op. cit.* pl. 182, there are *three* figures, forming a dramatic tableau.

[g] Passeri, *op. cit.* plates 190, 267, 270, 271.

[h] Plate 260.

[i] Of the eleven portraits in the National Gallery none have grey hair, though two women and one man have an elderly appearance.

[k] Fourth Vase-room, wall-case 16, No. F. 281.

[l] Lucian, *De Syria Dea*, 35, speaks of a bearded Apollo as existing at Hierapolis, but as a thing foreign to Greek ideas; indeed, representations of the bearded Apollo are very rare. Three I have

These artists of *Magna Graecia* go a step further too in introducing in human form representations of purely abstract ideas, as *Lyssa* and *Mania*, Rage and Madness.[a] There were changes also in politics and philosophy, novelties introduced with the doctrines of Pythagoras, as developed long after his death. But perhaps we ourselves are hardly in a position to cast a stone at the Italiotes on this score.

It is now high time to turn to the vase actually before us, for the loan of which I have to thank my friend Mr. Edwin Lawrence.

It is an amphora of Lucanian make, dating probably from the third century B.C.

On a question of the date of vases from *Magna Graecia* one can hardly pass by without notice an opinion of Professor Furtwängler, one of the greatest authorities on Greek ceramics, as indeed on many other branches of archaeology. In that remarkable storehouse of brilliant paradoxes, his *Meisterwerke der griechischen Plastik*, Professor Furtwängler tells us that with the foundation of Thurii, in 443 B.C., the art of the Athenian potter was transplanted into the neighbourhood of that colony.[b] That art, he suggests, was continued at Heraclea, and thence passed on to Tarentum. He traces the influence of the art of Phidias on the vase-painters and their work, and considers that scenes from tragedy are to be found on vases as early as the end of the fifth century.

Such vases, however, as the one now before us Professor Furtwängler would scarcely claim for a much earlier date than the first half of the third century; indeed he expressly speaks of some Lucanian vases as comparatively late. Thus he says (p. 150) that the grander vases represent "die Vorstufe zu den späteren lukanischen vasen." Again (p. 152) "Die Fabriken von Herakleia sanken; ihre Produkte (die später lukanischen Vasen) werden geringer und nehmen einen mehr und mehr localen Charakter an."

Mr. Lawrence's vase has been broken and repaired, perhaps slightly touched up. Though the handles are shorter it has a general resemblance to Furtwängler's

observed on black figured amphoræ in the British Museum (B. 147, 212, and 260, in the Second Vase-room). *Cf.* the François vase and the Melian vase and a fragment from the Acropolis at Athens. See also Gerhard, *Trinkschalen*, Taf. 4, 5 (a black-figured kylix from Tarquinii, *Annali d. Inst.* iii. 146, note 313); and *Auserlesene Vasen*, i. 1. *Cf.* p. 117, note 64; and Stark, *Archäologische Zeitung*, xii. 321 (a marble statue at Lyons; but the genuineness of the inscription is doubtful. See Overbeck, *Zeus*, p. 572, note 91, and *Apollon*, p. 367).

[a] As in the picture of the mad Herakles by Assteas, *Mon. Inst.* viii. 10.

[b] *Meisterwerke*, p. 151.

No. 48,[a] being an "amphora a Colonette," or some would say a kelebe[b] or crater.

Its dimensions are the following: height, $22\frac{1}{2}$ inches; breadth across handles, $20\frac{1}{8}$ inches; breadth without handles, $15\frac{6}{8}$ inches; breadth of opening, $12\frac{1}{2}$ inches; greatest girth, $45\frac{6}{8}$ inches.

The ornamentation is as follows:

On the top of the lip are ivy leaves in black, on pale red ground.

On the top and sides of the handles palmettes.

On the obverse outside the lip there is a laurel wreath, without berries, in pale red.

On the neck, which rises sharply from the shoulder, is (on each side) a pale red panel with a black spray of ivy with berries.

On the shoulder the straight-lined decoration called by the Germans "stab-ornament."

The main field is formed by a black panel, enclosed by an orange-red frame containing a double row of black spots on each side and a maeander pattern in black below.

Within this frame on the reverse are three draped figures with walking-sticks.

On this side there is no white or other colour except that of the clay and the black glaze, a lighter shade of which is used in the ornament, as in the spray of ivy.

On the obverse there are four figures forming what the Germans call a "kredenzscene."

In the centre a youth seated (to the left) on a heap of stuffs, and wearing a short chiton, ornamented with the swastika, and having a yellow girdle, stretches out his right hand and supports his left on a spear. He wears a white laurel-wreath Behind him a youth (also to the left and wearing a laurel wreath) stands with his right foot on a rock, in what may be called the Poseidon-pose, and rests his left hand on his spear. His short chiton, ornamented with rosettes, is confined by a yellow girdle. He has boots reaching halfway up the leg. Facing these youths are two maidens standing (to the right) in long chitons.

The first wears a necklace of beads, and two bracelets. There is a double row of black spots, forming a border for the front of her chiton from top to bottom. In her right hand she holds an *oenochoe*, in her left a large cup with yellowish white ribs, apparently offering it to the seated youth.

[a] In Plate iv. of his *Beschreibung*.

[b] Athenaeus (475) speaks of κελέβη as an ἔκπωμα or drinking-cup; but he seems to have misunderstood his own quotation from Anakreon.

Behind her (also to the right) stands another woman, carrying on her head a large vessel containing fruit or cakes, painted yellow. She seems to have four bracelets and seven brooches, of yellowish white. Above in the centre is hanging drapery; to the right a very small window.

The scene is of a well-known type. There is probably no reference to any myth; it is only a maiden offering a parting cup, seen so often on vases, sometimes in other works of art, as in the wall-painting from Paestum now in the Naples museum,[a] where it is in one instance a "stirrup-cup," offered to mounted warriors. In the marble relief at Leyden[b] it is a warrior on foot who holds the parting cup. However this may be, it is no everyday parting; he who drinks this draught is setting out for

> The undiscovered Countrey from whose Borne
> No Traveller returnes.

It is the delicate symbolism of the Greek, contrasting so strikingly with the ugly realism of Roman art, and with our favourite method of expressing Christian hope by the agency of skull and cross-bones.

A word as to the source from which this vase was obtained. Mr. Lawrence bought it at the sale of the effects of a lady who had been attached to the Court of Napoleon III. Now a relative of this monarch, Lucien Bonaparte, Prince of Canino, was the owner of that vast storehouse of vases, the Necropolis of Vulci. If then our vase had been made in Greece proper, we might easily have guessed where it was found; it is, however, undoubtedly of South Italian origin, and belongs to a class hardly likely to be represented in the Etruscan cemetery of Vulci. It may possibly have come into the possession of the Bonapartes in exchange for some of the fruits of their excavations there.

We know this vase is not a product of the Athenian Kerameikos, for the clay is inferior and the glaze dull and smeared.

That it is Lucanian I judge from its form and ornament, and also from the style of its pictorial representations, the treatment of the hair, and the drapery with its heavy folds. It does not indeed charm us with the grace of an Attic lekythos, or bring us face to face with the master spirit, like a cup that bears the signature of Euphronios. Yet it is something to have before us even the last flickering of Hellenic genius, doomed so soon to be stamped out by the conquering tread of Rome.

[a] *Mon. Inst.* viii. Taf. xxi. See Helbig, *Ann.*, 1865, pp. 262-295.

[b] See Friederichs-Wolters, *Bausteine*, p. 398, No. 1,197.

VI.—*On the more important Breeds of Cattle which have been recognised in the British Isles in successive periods, and their relation to other Archaeological and Historical Discoveries, by* T. McKenny Hughes, *Esq., M.A., F.R.S., F.S.A.*

Read June 14th, 1894, and January 17th, 1895.

I.—*Introduction.*

The origin of the commoner breeds of cattle is a question of the greatest interest to the antiquary and historian as well as to the agriculturist and naturalist. It is an inquiry into the history of an animal, which, when wild, was always hunted by man, and, when tame, has accompanied him in all his wanderings; which was domesticated in the far-off ages when it is doubtful whether we can rightly say that man was civilized; which was his standard for barter; his chattel, and the original of all pecuniary transactions[a]; an animal whose remains lie buried with him or accidentally covered up wherever man has been.

The migrations of the ancient peoples of Europe, and the traces of their settlements, have been treated very suggestively and more or less convincingly by various authors, especially by Professor Müller[b] of Vienna, and Dr. Hugo Werner.[c]

Surely any one who would follow the vicissitudes of the races of man must take note of the breeds of cattle that lived and died with him.

[a] *See* Ridgeway, *Metallic Currency*, p. 4.

[b] *Mittheilungen der Anthropologischen Gesellschaft im Wien*, xii. Bd. S. 59.

[c] *Ein Beitrag zur Geschichte des Europäischen Hausrindes*, Berlin, 1892.

It is obviously most important for the agriculturist and naturalist also to trace the origin of the varieties on the development and perpetuation of which so much time and money have been and are being spent, and which yet keep perpetually before him the existence of laws which seem to thwart his efforts: the curious prepotency of transmission in the more ancient breeds; the difficulty of fixing some characters which it is desired to maintain; and the strange and unexplained phenomena of certain generally unstable parts or qualities. If reversion of type is one of the commonest facts in breeding, it is surely worth while to inquire what the types are with which we are first acquainted, to which, if to any, our modern forms must have a tendency to revert; and it is to archaeology we must appeal for evidence on this point.

II.—*The Bison.*

It will be sufficient for our purpose to begin with the Bison, the first of the ox tribe found associated in this country with the remains of man. This breed is akin to the Bison, or so-called buffalo, of North America, where it may still be seen, and where, within the memory of man, it roamed in herds that took more than an hour to pass at a gallop, as Professor O. C. Marsh told me he had himself seen. But it has nothing to do with that useful beast of burden, the buffalo (*Bubalus*) of southern Italy. It is mentioned in the Niebelungen Lied and is represented now in Europe by the Lithuanian Bison. If not still living in the Caucasus it was there till quite recently, as proved by Mr. St. George Littledale, who shot the two fine specimens which are now in the British Museum. They must have been very wild and wary for such large animals to have entirely

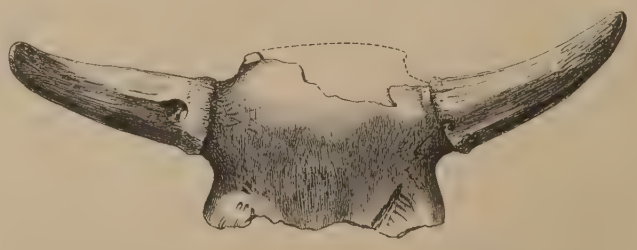


Fig. 1. *Bison priscus.* Barrington gravel. From a specimen in the Woodwardian Museum.

escaped the observation of the Russian explorers, although the not uncommon

occurrence of their horns, adapted and mounted for drinking out of, suggested that they could not long have been extinct.

The greatest difference between Bison and Bos is found at the junction of the front and hinder parts of the heads. In the full-grown Bos the upper edge of the frontal bone meets at a sharp angle the plane of the hinder part of the head, which slopes downwards and slightly forwards, that is to say, the planes of both forehead and hindhead break off abruptly at their junction with each other. But in the Bison the plane of the forehead passes over into that of the hindhead by a gentle curve, or, to speak more exactly, the frontal and occipital regions are connected by a narrow parietal ridge of which we find no corresponding trace in the head of the full grown Bos. This great divergence from the type of the parietal region common to all higher mammals does not become evident till the animal has attained its full growth. The skull of the embryo and of the calf of Bos resembles (as regards the connection of the frontal, parietal, inter-parietal, and supra-occipital bones) that of the full-grown Bison. By this we are brought to the conclusion that we may regard the shape of the Bison's skull as an example of the Bos type arrested at an earlier stage of developement.

Professor Wilckens of Vienna, in his paper on the skulls of oxen found in a prehistoric village in the Laybach Fen, accepts Rütimeyer's three species, *Bos primigenius*, *Bos taurus frontosus*, and *Bos taurus brachyceros*, but is unable to identify *Bos primigenius* among the remains from Laybach. He finds, however, a fourth form not hitherto recognised as distinct, for which he proposes the name *Bos taurus brachycephalus*. This type he believes to be represented in its purest form by the existing breed of Alpine cattle in the eastern Tyrol, especially in the Duxerthal and the Zillerthal. He has not recognised it in the Swiss prehistoric villages, but thinks that the cattle of the Enngerthal in the Canton Vaud belong to a closely allied breed. It has been, perhaps, partly confounded with *Bos frontosus*. These views he fortified by exact measurements of the skulls of some typical specimens and illustrated by plates. The distinguishing peculiarities of this breed are, in the forepart of the head, the breadth of the frontal bone above the eye sockets, and in the length of the horn-cores; and, in the hinder part, the sudden narrowing below the horn-cores (at the junction of the temporal and parietal bones), and the great width of the occiput between the aural protuberances.[a] The breadth across the palate is greater than the

[a] *Mittheilungen der Anthropologischen Gesellschaft in Wien*, Vienna, Karl Gerolds Sohn, 1878. *Naturforscher Verein*, Gratz, 1876.

length of the row of molar and premolar teeth in the brachycephalus type, whereas in every other race the proportion is reversed. In this group also the grinders are more square in section, and the proportion of the toothless back part of the lower jaw to the middle part, which contains the grinders, and to the vacant part between the grinders and the incisors, is much larger in the brachycephalus type than in any other. The maxillary protuberance (*tuber maxillare*) in the brachycephalus group is placed beyond the first molar, not, as in all other breeds, beyond the last premolar.

According to Wilckens the proportions of the skull put the descent of the brachycephalus ox from the Urus out of the question, while several points favour the theory of its genetic connection with the Bison.

Dr. Hugo Werner[a] does not accept the views of Wilckens as to the origin of the brachycephalus breed, and makes no mention of the Bison among the progenitors of the modern European cattle.

Dr. Weissenborn describing the Zubr or European Bison, says, "None of them have been completely tamed." "Their great antipathy to the *Bos taurus*, which they either avoid or kill, would render their domestication, if it were practicable, but little desirable. The experiments made with a view of obtaining a mixed breed from the Zubr and *Bos taurus* have all failed, and are now strictly prohibited."[b]

We have no complete skeleton made up of undoubtedly associated bones of the Bison from our gravel terraces, and therefore it is exceedingly difficult to refer detached bones with any certainty to Bison or Bos. As far as the evidence goes, the bones of the Bison seem to be generally finer than those of a Bos of the same size. Nor is there at present sufficient material to enable us to discriminate between the sexes in either forms. All the heads and horn-cores of Bison from the Barrington Gravels, the richest locality yet known, appear to be of one sex. They are all short, stumpy, and curved.

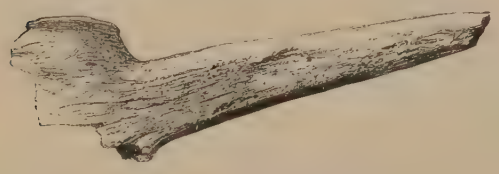


Fig. 2. *Bison priscus*? Dredged up off Yarmouth. From a specimen in the Woodwardian Museum.

A portion of a skull, Fig. 2, with one horn-core attached, which was recently dredged up in the North Sea off Yarmouth, has a core about twice the length of any Barrington specimen; it is also much thinner and straighter.

The specimen in the Worcester

[a] *Op. Cit.* p. 1. 14. See below p. 8.

[b] *A Monograph of the genus Bos*, by Geo. Vasey, London, 1857.

Museum, from the valley of the Avon, approaches more nearly our North Sea specimen. Is this a varietal or merely a sexual difference? Both, however, have the same protuberant occipital ridge, and neither shows any resemblance to our domestic cattle nor to any breed of Bos of which the remains have been found in this country.

It is almost impossible that in later times, after Bison and Bos had been long parted and differentiated, there could have been any cross between them resulting in the brachycephalus type. Such a circumstance would be contrary to all we know about the characteristics of the two groups. If it resembled the Lithuanian Bison in its habits it may be inferred not to have interbred or even associated with any species at all akin to our cattle. That Bison and Bos had a common ancestral form is *a priori* likely enough, and seems to be proved by the embryological investigations of Wilckens. On the continent a Bison is found in the older gravels, and the still existing species is of course found in recent deposits. The specimen labelled *Bos primigenius*, which hangs on the wall in the Geological Museum in Zurich (1894), undoubtedly belongs to Bison. But in Britain the bones of Bison are found only in the older gravel-terraces of the rivers which ran at a higher level than those of to-day. They have not been found in the fens, nor in any modern alluvial deposit. Therefore we may feel quite sure this species can have nothing to do with any of our modern breeds.

III.—*The Urus.*

With *Bison priscus* there are occasionally found the remains of another large animal of the ox kind. Its horn-cores are exactly like those of *Bos primigenius*, *Boj*, but no complete skeleton has ever been found in the older deposits in which Bison occurs, and we cannot therefore feel quite sure about it. The Urus, or *Bos primigenius*, became more abundant after the Bison had passed away, and is characteristic of the time when man used polished stone implements, that is, of the Neolithic or Newer Stone Age. It probably did not become extinct until the Bronze age.

A specimen (Figs. 3 and 4) was found in Burwell Fen, near Cambridge, with a polished stone implement (Fig. 5) sticking in its skull.[a] This interesting relic is now in the Woodwardian Museum. The lower part of the skull, which was

[a] Carter, *Geological Magazine*, 1874, p. 492.

detached when one of the photographs was taken, from which our figure is a reproduction, has been restored to its place. Many of the vertebræ and of the large

Front view. Side view.

Figs. 3 and 4. Urus (*Bos primigenius*) found in the peat of Burwell Fen, near Cambridge, with a Neolithic flint implement sticking in its skull. From the specimen in the Woodwardian Museum.

limb bones of the right side have also been preserved. The implement was broken off, perhaps by the force of the blow, perhaps in the attempt to extract it.

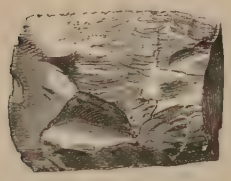


Fig. 5. The Neolithic implement found sticking in its skull.

I have already pointed out the characters by which the Urus can be distinguished from the Bison, which had a very broad forehead and a great rectangular protuberance between its straight outward-pointing horns; whereas the Urus had a narrow, flat or concave forehead, with a straight or slightly depressed occipital ridge, and its horns were very long and curved, first forward and downwards, and only upturned at the end. The Urus was a large gaunt beast with a long narrow face. A specimen has been found in which the bones of the face were more than a yard in length,[a] and which measured 42 inches from point to point across the horn-cores. His forehead made an acute angle with the occipital

[a] Owen, *British Fossil Mammals*, 498; Flemming, *History of British Animals*, 1828; *Proceedings of the Society of Antiquaries of Scotland*, ix. 645.

region, whereas in the Bison these surfaces were inclined to one another at an obtuse angle.

In this paper I rely chiefly upon the form of the head, as it is rarely that associated remains have been procured, and therefore the differences in the other bones have not yet been sufficiently well established to make the evidence founded upon them of practical use. Moreover, as Werner[a] observes, the skull may fairly claim the first place in considerations of this sort, since modifications of typical form come about much more slowly in it than in other parts of the body.

Cæsar,[b] in his description of the Hercynian forest, says "Tertium est genus eorum qui Uri apellantur . . ." "Hi magnitudine paulo infra elephantos . . ." "specie, colore et figura tauri."

Some have supposed that the animal referred to by Cæsar was the Lithuanian Bison, but the rest of his description shows that he has mixed up the accounts he got of the Urus and of the Bison. The Bison cannot be said to have the general appearance or colour or form of an Italian bull, and it is certain that no species of Bos can have been so untameable as Cæsar describes the Urus to have been, or can have had such antipathy to other breeds of Bos. The remains of this species are not common anywhere in the British Isles. A few horn-cores have been found in the Barrington gravel,[c] and in the museum at Lausanne there is a specimen of *Bos primigenius*, with stout horns exactly like those from Barrington. It was found in the "diluvium" of Lyons, associated with an elephant named *Elephas intermedius* by Jourdain. The Urus is recorded from Clacton[d] in Essex, and in the west it has been found near Bath, Tiverton, and Newton St. Loe, and in the bed of the Avon at Melksham.[e] In the north it has been procured from the bed of the Ribble,[f] and at Preston in Lancashire; and Harting records that the skull of this animal was found in a moss in Scotland with bronze celts,[g] and, according to Dr. Smith,[h] in a marl-pit near Selkirk, also with bronze weapons.

It has been stated that its remains occurred in a tumulus, probably of the Bronze age. Dr. Smith further mentions the finding "remains, apparently

[a] *Werner, op. cit.* 5.

[b] *Cæsar de Bello Gallico*, lib. vi. 26.

[c] Fisher, *Quarterly Journal of the Geological Society*, xxv. (1879) 670. See specimens in the Woodwardian Museum.

[d] Brown, *Ann. Mag. Nat. Hist.* 1839, p. 163.

[e] Woods, *Description of Fossil Skull of an Ox*, 4to, 1839.

[f] Tegetmeier.

[g] Harting, 214.

[h] On the Ancient Cattle of Scotland, *Proceedings of the Society of Antiquaries of Scotland*, ix. part ii. 587.

allied to this great ox, in the ruins of human dwellings," the brocks or Pictish houses of Orkney and Caithness. These records are, however, too vague to be of much value. In another similar case in Haddingtonshire the associated remains, as pointed out by Storer,[a] seem "to indicate the comparative recent date of these remains."

The formation in which the Urus has been most commonly found in the British Isles is the peat of the fenlands of East Anglia, a deposit, as I have shown elsewhere,[b] chiefly of Neolithic Age.

Werner[c] thinks that the short-headed ox bears a striking resemblance, particularly in the shape of the head, to the Abyssinian or Galla-zebu ox (*Sanga*), which is represented on ancient Egyptian monuments as a tributary of the Ethiopian races. He considers that on the strength of modern investigations we may fairly assume the ancestor of all European domestic cattle to have been the sole wild representative of the Taurus family, namely, the Urus (*Bos primigenius*, *Boj*), which makes its earliest appearance in Europe in the deposits of the Diluvial period, and the last-known specimen of which was killed in 1627 in the zoological gardens of Count Samoisky at Jaktorowo,[d] in Poland.

Nevertheless, he adds, some breeds of our European domestic cattle have most probably been derived from a cross with the Bibos, or even with the *Bos Indicus*.

Perhaps we may look to the Bibos cross for the explanation of the brachycephalus type, and to the humped-back Zebu, for some of the characters which were introduced into Europe through Egypt. It is a matter of observation that in such cross-breeds the humps of the Zebu is apt to disappear. Kuleschow[e] has pointed out that there is a resemblance between the skull of the Kalmuck ox and that of the female of Bos Sondaicus, and of the Zebu.

Werner recognises four varieties among European domestic cattle: 1. The *Bos taurus primigenius* of Rütimeyer; 2. The *Bos taurus longifrons* of Owen; 3. The *Bos taurus frontosus* of Nilsson; and 4. The *Bos taurus brachycephalus* of Wilckens. Wilckens himself gives as the modern representatives of these four types: of 1, the Dutch; of 2, the Appenzel; of 3, the Bernese; and of 4, his new variety, the Duxer breed.

[a] *Wild White Cattle*, 141.

[b] *Cambridge Review*, vii. 366.

[c] *Op. cit.* i. 14.

[d] Wrzesniowski, *Zeitschr. für Wissenschaftl. Zoologie*, 30 Bd. Suppl. 3 Heft s. 493-555.

[e] *Extrait du Bulletin de la Soc. Imp. des Naturalistes de Moscou*, 1888, No. 3.

On the continent the Urus, though perhaps not common, was known to exist down to the Middle Ages. In the Niebelungen Lied, Siegfried is represented as killing a Wisent (Bison) and four Uri. Heberstein, in the sixteenth century, mentions a beast of chase which he supposes to be the Urus. But in England no bones which could possibly be referred to the Urus have been proved to have been found with Roman or later remains, and no evidence has been obtained of its having ever been domesticated in this country. In the British Association Report on the wild cattle, presented at Manchester in 1887, it is stated that the Urus was probably the only indigenous animal of the genus Bos, not only in this country but throughout the Palæarctic region. But, even if this were granted, it would not prove that it is "the source of all our domestic breeds as well as of the white park cattle." If it has left its mark in any domestic cattle in the British Isles it can only be through the long-horned German cattle, of which strong traces may perhaps be seen in the Hereford breed, less conspicuously in the Glamorgan, and still less marked in the Pembrokeshire long-horned breeds. But, as we shall see, there is a spiral-horned Italian breed to which there appears to be a frequent resemblance among these long-horned cattle of South Wales.

IV.—*The Celtic Short-horn.*

Before the Urus had disappeared, the native short-horn, *Bos brachyceros* or *longifrons* (Fig. 3), had arrived in Britain. Some ox, with a small curved horn, is found with the mammoth in the older gravels, but we have not yet got enough of it to determine whether it is anything but a small bison, and it certainly cannot be stated in the present state of our knowledge that remains of *Bos longifrons* "are found in Britain associated with those of elephant and rhinoceros."[a] Rütimeyer calls it the "peat cow" or *Bos brachyceros*, a specific name, which has since had to give way to *longifrons* because *brachyceros* had been previously used for some recent breed. Rütimeyer considers that it is a stunted form of the *Urus*, *i.e.* of the *Bos primigenius* of Bojanus.

Bos longifrons was a very small animal; probably not larger than a Kerry cow. It was remarkable for the height of its forehead above its orbits, for its strongly developed occipital region, and its small horns curved forward and inward.

[a] *Encyclopædia Britannica*, v. 245.

Wilde[a] shows that a small race of short-horned cattle was common in Ireland from prehistoric times, but from his description of the remains found we should infer that it had been very early modified in some districts either by selection or crossing with a larger breed.

Fig. 6. *Bos longifrons.* Burwell Fen, Cambridge. Woodwardian Museum.

It is difficult to believe that all the scattered and associated bones of *Bos longifrons* which we find in the fens along with the remains of the beaver, the wolf, and the red deer, are those of domestic animals. They may, of course, be those of domestic cattle run wild; but if *Bos longifrons* was not indigenous, it must have been introduced by man into this country at a very remote period. At any rate, from its presence in such great numbers in pre-Roman and Roman times, as proved by excavations, we must admit a strong probability that some of our recent domestic breeds have been derived from it. Greenwell says that the bones of this species were abundant in Grimes Graves, which are of Neolithic Age. Nilsson thinks that it was once wild in Sweden, but Rütimeyer believes that it reached central Europe only as a domesticated animal.[b] Its bones are, however, common in the Lake dwellings of Switzerland, which date from Neolithic times. The Norway cattle of to-day, which closely resemble those of the Channel Islands and the Swiss mountains, are evidently derived chiefly from *Bos longifrons*. This is a question which cannot be settled by *a priori* reasoning nor on philological grounds, but only by an examination of the bones and of the exact association of remains during careful excavations.

Cæsar[c] mentions that there were large herds of domesticated cattle in Britain, and we know from numerous excavations into Roman and Romano-British rubbish pits that these belonged not to the Urus but to *Bos longifrons*. This then is the native breed with which we must start in all our speculations as to the origin and development of British oxen. The Romans found that breed here and no other.

Werner,[d] generalising from a large number of recent domestic cattle in which

[a] *Proceedings of the Royal Irish Academy*, vii. (1857-1861), 64.
[b] *Encl. Brit.* v. 245.
[c] *De Bello Gallico*, v. 17.
[d] *Op. cit.* [9].

the bony frame-work was found to agree with that of *Bos longifrons*, describes the breed as a small form, of slender, almost graceful build. The hide is of a uniform yellowish-grey, grey, or brown tint, white patches being uncommon. Other characteristics are, a lighter streak round the muzzle, a light iris, a black stripe down the back, the lighter colour of the belly and the inner side of the legs, the occurrence of lighter coloured hair within the outer ear, and long hairs on the rim of it. The skin and muzzle are always dark in colour.

If this description correctly represents the characters of the ancient *Bos longifrons*, it is an important confirmation of the views as to the origin of the Chillingham and Highland cattle urged in this paper, for it explains some of the commoner deviations from the Roman type and supports the contention that there were no parti-coloured animals in either parent stock.

Werner[a] further, in his remarks upon the cattle, says, "The Celts also took possession of part of England, and consequently we still meet with black-brindled Celtic cattle in Ireland and Wales, as, for instance, the Kerry and Welsh breeds and red Celtic cattle in the south of England, such as the Devons, Sussex, Herefords, and Long-horns." It is needless to point out that any classification which groups together the breeds above enumerated is entirely inconsistent with the history of the origin of our native cattle which is advocated in this paper. Werner notices the common and widespread reversion to a black-brindled type so common in Wales and Ireland, pointing to some ancestral form, the age of the introduction of which, however, still rests in obscurity.

V.—*The Romano-British Cattle.*

Where excavations have been carried on over areas long occupied by the Romans, it is found that the native breed has been modified and improved. The new breed (see Fig. 7) is larger, the horn-cores are stouter in proportion to their length, and, starting from the side of the head, have a tendency outward and upward, instead of having the strong forward curve of *Bos longifrons*. All intermediate sizes and shapes are found, from the small native to the new improved breed. The characters of the mixed breed are not such as could be accounted for by a cross with the Urus, even if we did not know that the Urus had long been extinct in Britain.[b] The skull found at Silchester and recently

[a] *Op. cit.*

[b] *Vide sup.* p. 5.

exhibited in the Society's rooms is an example of this type. The specimen I have figured was found in the peat near Reach Lode, north of Cambridge.

Fig. 7. Romano-British with horn-cores showing a tendency to turn up. Reach Fen, Cambridge. Woodwardian Museum.

One remarkable fact is worth recording in relation to this skull. The peat diggers, as their long trenches approached Reach Lode, always came upon a sort of bank, where the peat was harder and mixed with earthy material. This indicated that there had been a fosse dug through the peat to the underlying marl and clay, and that the bank was the upcast from this fosse. It was in the direct line from Reach to Upware, starting from near the great quarries which may date from Roman times and from the end of the Devil's Ditch, along which so many Roman remains have been found, and pointing straight for the southern end of the Upware island, where also there are abundant traces of Roman occupation. All the Roman pottery from this part of the fenland which I have been able to trace to its exact locality, was found along the line of this raised bank.

I dug out of the rubbish pits round the Roman town of Great Chesterford many characteristic heads of this type, which, with numerous other relics of the same date, I have handed over to the Cambridge Antiquarian Society.

Mr. Cadwallader Bates has sent me a photograph of the skull of an ox found in the deposit at the bottom of an old pond near the Roman station at Ilkley in Yorkshire, and now preserved in the museum at Ilkley. This evidently belonged to an animal of the *longifrons* type, as shown by its short curved horns, while the modification due to the Roman cross is seen in the upward inclination of the cores as they start from the skull.

Native British coins not unfrequently have a bull represented on them, and the bucranium or bull's head appears on the coins of many British princes. Bateman[a] suggested that this, taken in connection with "the not unfrequent occurrence of the whole or part of the head of the ox in British barrows, goes

[a] *Ten Years' Diggings*, 130.

far to prove the existence of some peculiar superstition connected with it, of which no notice has reached modern times," but a more satisfactory explanation will probably be found by tracing the design back to the early coins described by Ridgeway,[a] which were stamped with the cow as the unit of commerce. Moreover, as Sir John Evans[b] has pointed out, these British coins have Roman legends and are copies of Roman coins. They cannot, therefore, be considered as of much value as independent evidence.

We see represented on them the conventional thick, stumpy horns of a bull, but there is no approach to the type of the Urus, nor do the bones of the Urus occur, as far as I have been able to ascertain, among the remains of animals found in tumuli, which are generally nothing but the relics of the funeral feast, or perhaps sometimes of the food placed by the bodies of the departed, to support them on their long journey.

It would be rash to say that no domestic cattle ever reached the shores of Britain from the continent before the time of the Romans; but, although there is reason for believing that an improved breed allied to *Bos longifrons* has been found in the Lake dwellings of Switzerland, and that a closely allied domesticated breed existed at a very early period in Scandinavia (*Bos frontosus* being probably founded on a modified and perhaps domesticated form of *Bos longifrons*), there is no proof of the introduction of either of these, nor of Wilcken's brachycephalus type into Britain in pre-Roman times.

VI.—*The Roman Cattle.*

The first modification of the native small shorthorned breed (in this country) is always observed in connection with Roman remains. Let us, therefore, see whether we can obtain any evidence as to the kind of animal that must have been imported, if the Romans brought any of their own cattle over with them. With a view to this we must study the representations of oxen on mural paintings, sculpture, and coins of the date of the Roman occupation. We may gain some information about it from descriptions in Latin writers,[c] and we shall learn still more from an examination of the breeds still found in Italy and in the Roman provinces, with help from later historical notices.

We cannot suppose that the symbol of Italy should have been represented on sculpture and coins by a figure which did not correctly give such obvious characters as the upward or forward or downward curvature of the horns,

[a] *Op. cit.* [b] *Coins of the Ancient Britons*, 242. [c] *Cf. Werner, op. cit.* 21, *et seq.*

especially when we notice that a distinction is made between the horns of the different sexes.

There are two common patterns of horn which we may indicate in a homely way by comparing one to the prongs of a pitchfork when the handle is held horizontally (Fig. 8), and the other to the prongs when the handle is vertical (Fig. 9). If we turn to the figure of the Urus (Fig. 3) we see the first type with the horns curving forward in the plane of the animal's back, but if we look at the figures of Roman oxen (for example, Fig. 10) we shall find the second type. The horns are upturned, lying approximately in the plane of the occipital region. In most ancient representations of Roman cattle we notice a rectangular profile, a developed dewlap, and large hoofs as well as the lyre-shaped horns.

Fig. 8.

Fig. 9.

Another important feature is the colour, and from Latin authors we gather that there were commonly in Italy oxen of a fulvous or reddish colour. Black oxen were mentioned as appropriately slaughtered at funeral feasts; while the white sacrificial bull, though perhaps difficult to procure of faultless purity of colour, cannot have been uncommon.[a]

Fig. 10. Roman Ox, from painting on wall at Pompeii, as reproduced in Thes. Antiq. Rom. tab. 23.

VII.—*Modern Italian Cattle, type A.*

Another line of inquiry, suggested by this approach of the modified breed found with Roman remains in Britain to the type of ox represented on the paintings, sculpture, and coins of ancient Rome, is a comparison of both of these with the breeds of cattle now seen in Italy. Fortunately for our purpose the types do not seem to be very numerous. With the *Bubalus* or Italian buffalo we have now nothing to do, and the red and parti-coloured cows recently introduced for dairy

[a] Pliny, 22, 5, 5; Horace, *Od.* 4, 2, 60; Virgil, *Georg.* iii.

purposes are obviously distinct from the ordinary cattle used everywhere for draught. It is among these powerful beasts of burden that we must seek the traces of the old Roman breed.

Of these we notice two types, the first of which (A) is a rectangular large-boned animal with upturned lyre-shaped horns, a well marked dewlap, and, in the hard-worked beasts of burden at any rate, a conspicuously large spreading hoof. In all these particulars strongly resembling the oxen on the coins, sculptures, and paintings.

The Italian cattle are always whole coloured and symmetrically shaded, that is to say, there are none of them piebald, or sheeted, or black red and white in patches. They are generally mouse or fawn coloured, shading off to white underneath, and of every degree of intensity down to pure white. The insides of the ears, the muzzle, and the whole of the end of the tail are generally black or pink, the black being probably the character due to reversion to a primæval race, the pink being rather the perpetuation of albinism by selection.

Fig. 11. Modern Italian Bull, type A 1, with short upturned horns. British Museum.

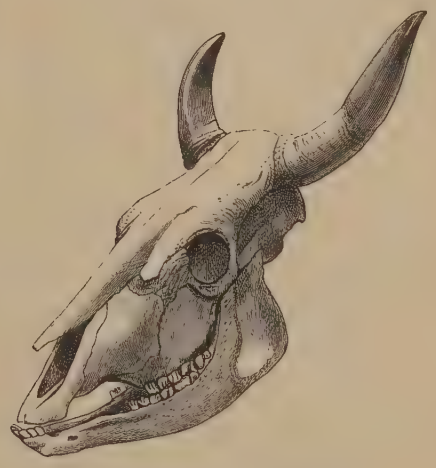


Fig. 12. Chillingham Bull. British Museum.

If, now, we compare the skeleton and skull, especially of the modern Italian bull, with that of our Chillingham bull, we shall find them to be almost identical, and thus carry on the connection between the Roman cattle and our modern British breeds. Fig. 11 is that of a modern Italian bull, from the specimen

presented by the King of Italy to the British Museum. Fig. 12 is that of a Chillingham bull, presented by Lord Tankerville. These figures are drawn from photographs taken by the kind permission of Sir William Flower. I have had the pictures reduced to the same actual size to facilitate comparison of form only. The real proportions being, Italian, 23 by $8\frac{3}{4}$ inches, and Chillingham, 18 by $7\frac{1}{4}$ inches.

Although the inquiry to which I would chiefly confine myself commences with the importation of this type of cattle into Britain by the Romans, the views at

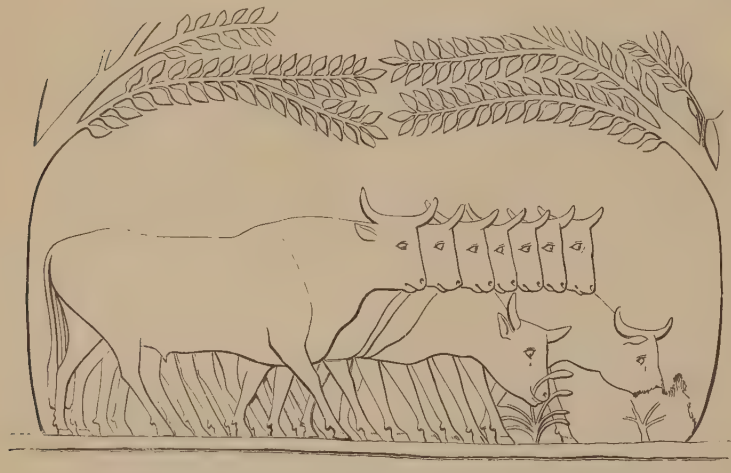


Fig. 13. Egyptian Cattle in bas-relief on temple of Hatshepsu, from photograph kindly lent by Miss Margaret Thomson.

Fig. 14. Italian, type A 2. Sicilian, with long upturned horns, from a hasty but clever sketch taken at Alcarno, in Sicily, by Canon Weston.

which I have arrived are strengthened by observing that it seems to have been stereotyped by ages of domestication in Egypt. The conventional representation of cattle from the monuments of the Rameses would do for a Roman or a Chillingham herd. The lyre-shaped horn is sometimes more, sometimes less, conspicuous, probably depending upon the age of the animals represented, but the upturned horn and general outline is common to all.

Fig. 15. Coin of Euboea.

The lyre-shaped form is more obvious in some of the longer-horned varieties, of which traces were to be seen, at any rate half a century ago, in Sicily, and is very distinct on the coins of Euboea.[a]

Both of these types, A 1 and A 2, belong to the southern group which came from Egypt through Southern Italy to Britain.

[a] Ridgeway, *Op. cit.* p. 306.

VII.—*The modern Italian Cattle, type B, Emilian.*

Another breed commonly seen in Italy, notably in Emilia and Umbria,[a] is a large animal with enormous horns growing spirally outwards from either side of the head. In colour and general appearance these are very like the breed A 1 with the upturned horns, which appear to be the form most commonly represented on the coins and sculpture of the Romans. The Emilian cattle are generally larger but differ in the shape of the horns, which are often much longer than those in the sketch. There are intermediate varieties, but the two types are obviously distinct. There is a tradition that these great Emilian cattle, especially those of the Val di Chiana, were imported from Podolia, but I have been unable to learn anything definite on this point. If they were, they should probably be referred to some ancient breed lingering on the northern borders of Greek civilisation, to the ἕλικες βόες of Homer in fact, and not to any indigenous Russian race. If, as we shall see, there is ground for suspecting that some of their racial characters may be detected in the patulous-horned bullocks of Hereford

Fig. 16. Modern Italian breed, type B, Emilian, from a sketch by Miss Sibylle Hall.

Fig. 17. Abergavenny Bullock.

and South Wales, we must trace these back to animals imported by the Romans, and thus derive them through Northern Italy, from Greece, and Asia Minor. But in speculating on the origin of the races on the borders of Wales we must not forget the influence of the beef which Taffy used from time to time to steal from his Saxon neighbours.

[a] Cf. *Lucan, Phars.* i. 473; Stat. Sylv. i. 4, 129.

Roman Provinces, &c.

If we now turn to other districts occupied by the Romans we shall find the same story told by the cattle. Traces of the Italian breeds are everywhere seen. In Rhætia, whether we explain the fact by reference to the tradition that it was peopled from Etruria or to the centuries of Roman occupation, there still exists a tall, slightly-built breed of silver-grey horned cattle resembling those of Italy.[a] The beautiful fawn-coloured, long-horned Spanish cattle are derived from crosses of the later-introduced Roman breeds with some fine Iberian stock, which was itself probably of Egyptian origin, and therefore, as we have seen above, of the same type as that of Southern Italy.

This suggestion is borne out by and explains what Darwin records respecting the wild herds of South America.

VIII.—*Modern Spanish, South American, &c.*

The cattle of South America are, of course, directly descended from those brought over by the Spaniards, and nothing is more probable than that cattle in such circumstances should revert to the whole-coloured, symmetrically-shaded type; and also, if the lighter colours were the commoner in the original stock, as appears to be the case among the Italian cattle to-day, that this character also should be prevalent among their descendants, when breeding without selection and under feral conditions.

In the Falkland Islands the cattle, which were introduced from La Plata, and have run wild for at least a century, are "white, with their feet or whole head or only their ears black."

Anson records that the wild oxen in the Ladrone Islands, which were all introduced by the Spaniards, are milk-white except their ears, which are generally black.[b]

In all these cases we need not seek an origin in some unknown wild race when we see to-day on the plains of Italy an ancient breed with strong prepotency of transmission, which, as far as we can gather from the evidence of monuments and history, resembles, in all essential characters, the breed which the Romans must have taken with them wherever they established themselves; and there are few outliers of civilisation which we do not directly or indirectly owe to Rome.

[a] Kalnegger, *Der Oësterreichischen Rinderrassen*, i. 4 Heft, s. 105.

[b] Anson's *Voyages*, bk. iii. ch. ii. 309.

IX.—*Swiss Cattle.*

We might expect to obtain useful evidence bearing upon our inquiry if we could find some other region in Europe where the conditions were similar as regards cattle breeding to those we have shown to have prevailed in Britain at the time of the Roman invasion. In Switzerland we seem to have what we seek. We know, from an examination of the *fauna* of the Lake dwellings, that *Bos longifrons* was the common type of ox there in pre-Roman times. We know that the Romans occupied Switzerland, and there we must have had *Bos longifrons* modified by crossing with the Roman breed. In accord with this we find to-day, along the low rich lands around the mountains, the Roman type prevailing. The cattle are identical with those of Italy. But as we go further up into the mountains the native short-horned race has not been wholly superseded. The mixed breed resembles almost exactly that of the Channel Islands. It is obviously derived from the native short-horn modified by a cross with the larger southern cattle introduced by the Romans. It is whole-coloured, shaded from mouse or fawn colour, or from black or red, to light below. It has small horns growing outward from the side of the head, and turning more upward or forward, according as they take more after one or the other parent stock. The original Ayrshire breed has much the same characters.

Fig. 18. Swiss Mountain Breed. Zermatt, from a photograph by Horace W. Monckton, Esq.

It is not impossible that the Celtic short-horns (*Bos longifrons*) should, by selection and care, have become the parents of a larger breed, and perhaps *Bos frontosus* may have been so developed. But, seeing that in the Roman ox, as represented in contemporary works of art, as described in ancient writers, as seen in its descendants in Italy at the present time, we find exactly the type towards which improvements were tending, as inferred from the skeletons of the oxen dug up among Roman remains in Britain and elsewhere, it is more probable that the differences that we observe were due to crossing with the cattle which

the Romans brought over with them, and which had the very characters towards which we see an approach in the modified form.

It is an interesting fact, that the yellow or fawn colour comes out so commonly where there is reason to suspect a commingling of two or more ancient breeds.[a]

X.—*The White Park Cattle of Chillingham, etc.*

Let us now examine the varieties of the so-called wild white cattle. If a selection of the lighter coloured individuals of the common draught-ox of Italy were turned out in a park in England, no one would suspect that they did not belong to the wild white breed. There would be less difference between them and the Chillingham cattle, in essential characters of form and colour, than there is, for instance, between the Chillingham and Chartley herds. In both the wild white cattle and the Roman breed we have a rectangular animal with upturned black-tipped horns, a tendency to be symmetrically shaded from a mouse or dun or fawn colour to white, black or pink-lined ears, and black tail-ends. A comparison of the skeleton of the Chillingham bull in the British Museum with that of an Italian bull presented by the King of Italy (see p. 15, Figs. 11, 12), shows that there is no essential difference between them.

We may set aside as of no value all the evidence founded on the ancient continuity of impenetrable forests over the country in which the white cattle have been preserved, which has suggested that they are isolated herds of some primeval indigenous breed that lived in those forests. Cattle only seek woods for shelter, and dense and extensive woods would not facilitate but arrest the migration of animals that usually feed in the open plains.

Anyone who has seen the gradual acceptance of the modern Durham or short-horn in the northern and western counties will readily understand the advance of the Roman cattle in England. The short-horn bull was not turned out on to the mountain pasture or fell side. Only the more wealthy and enterprising had a herd of thoroughbred short-horns. But a half-breed became common and the thoroughbred soon followed. If any of these people had to move on, their first care would be to take with them their best cattle. Those that roamed half wild over the unenclosed land like the mountain cattle could be less easily transported,

[a] *See* Darwin, *passim*; Sanson, quoted by Werner, *op. cit.* 22; Feser, *Zeitschr. d. Landwirthschaftlichen Vereins in Bayern* (*Wahrnehmungen über das rothbrauner Oberfalzer-Rind*), Aug. 1884.

and in all probability often became wild, and gave rise to the medieval stories of the *Bubali* or *Tauri sylvestres*. Bubalus would have been used in those days for cattle that had run wild. *Bos camporum, bubalus nemorum.*

Thus the breed improved by the Roman stock would be driven away to the west and north before the Teutonic and Scandinavian invaders, no cultivation or selection being possible in those troublous times which followed soon after the Roman legionaries had been withdrawn and the various peoples of north-western Europe were taking possession of the country or making temporary incursions into it. There was no longer such security as had allowed the ordinary Romano-British farmer to improve his breed and isolate the higher class cattle in enclosures. But, where here and there a larger herd of the better breed had been surprised or anyhow secured, it is not likely that the new comers would destroy them. They would be kept in the enclosures and parks of the new lords of the land and handed on more or less pure to the feudal and ecclesiastical establishments of early medieval times. This explains why, in all the so-called wild white cattle of Britain, there is a common tendency to a symmetrical shading of mouse or dun or fawn colour, but a variation between the different white herds in respect of reversion to the party-coloured German type.

Where the herd was founded on the light coloured Roman breed, without any considerable mixture of other different strains, the Chillingham type prevails, but if the herd was frequently modified by the introduction into it of white calves that appeared among the more southern breeds, where the influence of the newer importations of German cattle was beginning to be felt, the type would be that of Chartley. Storer,[a] giving an account of his first visit to Chartley, says, "My astonishment was great at finding that instead of resembling the Chillingham animals, they were of a different variety, and were really "long-horns," their general characters being the same as those of the old long-horn breed, which were the ordinary stock of Derbyshire and Staffordshire, till about fifty or perhaps sixty years ago."[b] In the Lyme breed the long-horn type comes out still more strongly.

Low does not seem to have noticed this, for he says, "The wild white forest breed, though reared for ages in parks in the West of England and Scotland, never assumes the characters of the long-horned race."

It is just possible that we may have in the Chartley and Lyme herds a trace

[a] Storer, *op. cit.* 240.

[b] Low, *The Domesticated Animals, &c.*, 369.

of the ancient spiral-horned Emilian and Umbrian breed, but it seems on the whole more probable that the difference is due to late crosses with German long-horns.

There is no history of these herds going back more than about 200 years, and, within that time, plenty of evidence of crossing with domestic breeds. Thus, there is strong probability that the breed was often modified by turning out with them good young stock which took after the white sire, to say nothing of the results of accidental inroads by domestic bulls. There are abundant traces in the character of the herds to prove that such crosses have taken place, even if the historic evidence did not tell the same tale.

The Chillingham bull with mottled feet, exhibited in the Zoological Gardens, is an obvious example of reversion to a cross of some such party-coloured slouching-horned breed. The animal selected as typical by Landseer was quite different, and so is the skeleton in the British Museum. The drooping horns are such as characterise animals which have a tendency to become polled, as is the case with many of the white park cattle, notably in the case of the Cadzou herd. What the conditions are which tend to produce polled cattle seems not to be clearly made out. That there were hornless cattle among the Germans in Roman times might be inferred from Caesar's [a] description. Herodotus [b] also mentions the hornless cattle of the Scythians, from which Middendorf [c] supposes the hornless cattle of North Russia are descended.

The horn, which is a development of the skin, is less easily modified than the core, which is a part of the bony structure of the skull. Lord Selkirk has given an account of the increase in the number of hornless animals in Galloway due to selection and breeding, in answer to the demand for polled cattle, and has pointed out that often a small horn hung on the skin when there was no bony support for it on the skull. Akerblom has described some Swedish breeds which have stunted horns set loosely in the hide without any bony horn-core.

In all hornless cattle, and generally in breeds in which there is a tendency to become polled, the occipital region is developed into a strong, undulating, protuberance; whereas, in such a form as the Urus, in which the horns are of great length, there is no prominent ridge between the horns.

[a] Germ. 8. [b] iv. 29.

[c] *Uber die Rindviehrasse des nördlichen Russlands und ihre Veredelung; in Landwirthschaftl.* Jahrbuch, Berlin, 1888. Translated by Bajobr, s. 299. Cf. *Hehn, Kulturpfl. und Haustl. &c.*, 1874, ii. s. 410; *ritzinger Wissenschaftl. populäre Naturgeschichte der Säugethiere*, V. Band, s. 612, Vienna, 1889.

The herds of white cattle, both at Chillingham and elsewhere, have to be carefully watched, because coloured calves are frequently dropped.[a]

It is probable that when a white calf appeared among the herds outside it was in former days commonly turned into the park with a view to improving the size and stamina of the ancient white stock,[b] and in ignorance or neglect of the fact that it carried with it a tendency to revert to the colour of its own immediate ancestors.

Colour is not such an unstable element in cattle breeding as is supposed by some. In fact, it is so only within very narrow limits, and any marked variation can generally be traced to some not very remote cross.

In the report of the committee of the British Association already referred to, on the Herds of Wild Cattle in Chartley Park, and other Parks in Great Britain, presented at Manchester in 1887, it is stated that "the Urus was probably the only indigenous wild ox,[c] not only in this country but throughout the palæartic region, and the source of all our domestic breeds, as well as of the White Park cattle; and we may fairly trace these park herds back to the *Bubali* or *Tauri sylvestres* which are mentioned[d] as occurring down to mediaeval times, but whether these animals were genuine Uri or feral cattle admits of some doubt."

It states that there is a tendency among the white park herds to throw black calves, or calves marked with black or red, and mentions one park in which "calves produced by the park cows are kept, if correctly marked, &c., even when the sire was probably a common bull," and other cases in which they had at various times crosses with ordinary Highland, Ayrshire, and Indian cattle.

Although the tendency to revert to a fawn or mouse or dun colour points to the original of the Chillingham herd having been the same as that of the modern Italian beast of burden, selection has caused the lighter shades to prevail. White animals have always been looked upon as of special value. White sacrificial bulls must have been imported by the Romans, who would also keep a selection of such as they could procure from native sources. They would not have been considered so valuable if there had not been at first some difficulty in procuring them. White elephants, white deer, and white asses have always been regarded with superstitious favour. The Hindu of to-day looks upon the white bull as sacred, and only a few months ago a white bullock was presented to General Joubert by Malabroch, a South African chief, as a peace-offering.[e]

[a] Storer, p. 196, *et seq.* [b] *Ib.* p. 203.

[c] *i.e.* Of the genus Bos; there was in addition the Bison. Moreover, it is implied that the Urus had not become extinct, and *Bos longifrons* is ignored.

[d] By Matthew Paris, FitzStephen, and others. [e] *The Times*, June 14, 1894, p. 5.

In the Middle Ages we read of their being able to hand over pretty large herds of white cattle on demand.

In the laws of Hywel Dda,[a] A.D. 940, it is ordered that white cattle with red ears should be paid to the Princes of Wales, and one of them demanded on one occasion 100 white or 150 black cattle, which shows the greater value attached to the white.

Maud de Brecon [b] sent to King John 400 cows, and one (?) bull, all white, with red ears, to appease his wrath. These, of course, were all domestic cattle, for it was difficult enough to send tame beasts out of Breconshire to England in those days, but would have been quite impossible to send wild cattle. I remember relations of my own who were disappointed of their Christmas beef because the bullock which was to have supplied it had escaped up into the mountains. Such runaway cattle would in old times, with woodlands to hide in, have easily reverted to "feral" conditions.

The story of Twm Sion Catti and the white ox carries this regard for the colour down to much later times. Twm Sion Catti was born in 1590. A pair of oxen were ploughing together, one was black and the other was white. Twm wanted to steal the white ox, so he drew the boy away from his charge by letting out a wired hare in front of his corgi, and, as the dog was gaining on the hare, the boy could not resist the temptation and followed, looking back from time to time to see that the white ox, at any rate, was safe. Twm, watching his opportunity, threw a sheet over the black ox and drove the white ox away. The point in the story to which I wish to call attention is the greater value attached to the white ox by the ploughboy and by Twm Sion Catti.

Such being the case, it was probable that white cattle would be selected and kept together in enclosures, in order to have a supply ready when required. There would be thus induced a tendency to fixity of character; and, as these cattle had a higher value, the invaders would not destroy them or turn them out. So that ancient enclosures with white cattle would be kept up.

When in early times there was a larger proportion of dark-coloured animals, the appearance of a white calf was regarded as a portent, and exaggeration soon added other peculiarities. At the birth of Claudius Albinus,[c] for instance, "multa imperii signa, quam esset natus facta dicuntur, nam et bos albus pur-

[a] *Myvyrian Archaeology*, ed. Owen Jones, Denbigh, 1870, cap. ii. § 3, pp. 1014-1062.

[b] Speed, *Hist. Great Britain*, folio, 1611.

[c] Grævius, *Thesaurus Antiquitatum Romanorum*, 797.

pureis ad plenum colorem cornibus natus est." Those who in later times possessed white cattle in the same way looked upon the appearance of a black calf among them as a portent.[a]

The descriptions of the wild bulls of the Caledonian forest have been handed on from one writer to another, with so few variations and additions, that we cannot but feel that the opportunities of observation on which the accounts were based had not been numerous. There is no circumstantial account given by anyone who had seen them himself. Boethius, among the first, described them as of the purest white, with manes like lions. The modern white park bull is always described as having a shaggy coat, which is yellow and dirty from the earth which he throws over his forequarters when pawing the ground.

An inexperienced stranger, who for the first time had seen a highland bull charging with his head down, and his high shoulders covered with rough curly hair, would probably, when he got home, give such an account of the animal from which he had escaped as would leave much doubt as to whether he had not seen a bear or a bison, but would hardly suggest a bull. The official reports[b] respecting the ravages of a supposed monster wolf in the south of France a little more than a century ago teach us to regard such evidence with suspicion.

Some importance has been attached to their having been called wild beasts,[c] but anyone acquainted with grazing counties will know that all cattle are commonly called beasts, sometimes with a more and sometimes with a less restricted meaning; just as in a partridge country, "have you seen any birds?" would never be taken to refer to any other members of the feathered tribe than partridges. And as for their being spoken of as wild, that would not mean that they were unreclaimed, but only that, within certain limits, they roamed and bred uncontrolled, as do the cattle on ranches, which have all sprung quite recently from domestic animals. In most cases it probably conveyed little more than we mean when we talk of the ponies which run wild on the mountains of Wales, and the misunderstanding of the use of words which founds an argument upon the application of the term wild beasts to the white park cattle is of the same kind as that which gives point to the story of the Frenchman who boasted, in excuse for his want of success in deer-stalking, that he had killed of the "savage mutton ver' many".

The view that the white park cattle are not derived directly from any wild

[a] Storer, 221-237.

[b] Baring Gould, *The Deserts of Southern France*, i. 112, *et seq.*

[c] Storer, 91.

race, but from an ancient domesticated breed, is strongly supported by the fact that they calve at all seasons. Their bones are fine according to Rütimeyer, whereas the bones of the Urus are coarser than those of the Bison. Indeed the difficulty in the case of the white park cattle is not so much to tame them as to keep them wild.

I dare say there are some who will regret the necessity of giving up the old idea that the wild white cattle of our parks are the direct descendants of the mighty Urus of the Stone Age. But if the views here urged should be correct, their pedigree is probably as long as, or even longer, than that would imply, and certainly carries them back to a very noted stock with a historical record of some five thousand years. For there is little doubt that, through the light-coloured oxen of southern Italy, their original must be traced to the herds figured on the monuments of Egypt, and their herd-book should commence with the well-known bull Apis.

XI.—*Highland and Welsh Cattle.*

Before we can feel satisfied that we have in the Italian cattle brought over by the Romans and the little Celtic short-horn the origin of all our more ancient breeds of domestic cattle, we must consider the principal types and their distribution and see how what we know about them agrees with the theory.

We easily find the traces of *Bos longifrons*, not only in all excavations from Roman times on, but we see the type in the Kerry cow and, less clearly, in the small black cattle of the Welsh mountains. It probably forms the basis of the Channel Island cattle, though there is some reason for suspecting that this breed was introduced from a district where *Bos longifrons* had long been improved into the variety to which the name of *Bos frontosus* was given.

Then we find in the Chillingham cattle the purest representatives of the Roman cattle, the divergence of character in some of the white park herds being due to crossing, in much later times, with various imported breeds, rather than to a larger admixture of the old native stock of *Bos longifrons*.

The kyloes belong to the same type, though locally, and especially round the borders of the Highlands, modified by selection and by crossing with later importations.

It seems to be sometimes better in such cases to take, by way of illustration, the sketch by a good artist who has studied the characteristics of a large number

of individuals, and who, therefore, gives as it were a compound photograph of many examples, rather than to reproduce the photograph of one animal that accident has thrown to the front. In the cow taken from MacWhirter's picture[a] of Highland cattle coming down a glen through snow, the lyre-shaped horns are very accurately represented.

Fig. 19. Highland Cow. After MacWhirter.

"The Chillingham cattle," says Vasey,[b] "are white, and the Highland cattle or kyloes black, but with this exception the very same description might serve for both breeds."

When Sir John Orde wanted to make up the Kilmory herd from a white Athole bull, he selected the kyloe or West Highland cow as most resembling it,[c] and the herd is described by Mr. Chandos-Pole-Gell as "exactly like the ordinary West Highland cattle, only white in colour."

The Welsh cattle may be regarded as a variety of the kyloe, except some remnants of the small Celtic short-horn in the mountain districts and some modified by a cross with long-horns on the border lands. But, of course, in every area long isolated we may expect varieties due to the peculiar character of the herds that were driven there after Roman times, the cattle that were there before, and the breeds that followed after.

More definite evidence is offered by Professor Low.[d] "The parent stock of the mountain breeds of Wales, it has been seen, is distinguished by a tapering upright horn. As the mountainous country passes by gradations into the lower, the cattle deviate from the native type, and assume insensibly the character of what are termed long-horns. This character is indicated by the direction as well as by the length of the horn." Low is not speaking of the small mountain breed of the *Bos longifrons* type, but of the passage from the Welsh cattle of the kyloe type into that of the long-horns. What he describes is easily explained on the view that the Welsh mountain breeds, which had much of the Romano-British character, were being encroached upon and modified along the border lands by the later German breeds, such as were represented by the old English long-horns. All along the rich pastures of south Wales, from the alluvial plains of the Severn and the Wye, we find a large native breed, modified by some later-introduced cattle from the east.

[a] From "The Vanguard."

[b] Vasey, *op. cit.* p. 170.

[c] Storer, 349, 355.

[d] Low, *The Domesticated Animals, &c.*, 306.

The Herefords seem to have retained much of the form of the Castle Martin ox; but the red and white, almost symmetrical, colouring of some valued cross has been stereotyped by care. The Glamorgan breed belongs to the same type, but is black or iron-grey, irregularly marked with white; while in the black Castle Martin, as in the cattle of the corresponding northern promontory of Carnarvon, we have some still more ancient stock, in which, especially among castrated animals, we see many of the characters of the Emilian ox. And nothing is less improbable than that the Romans introduced some of the Emilian breed with the long spiral horns proceeding horizontally from either side, so that their axes are in one straight line, as well as their common cattle with the upturned lyre-shaped horns.

"The Kerry breed," says Low,[a] "the Devon, the Welsh, and the Scotch Highland differ as much from the long-horns as the white man from the negro; and the two classes retain their character distinct, though naturalised in the same tract of country beyond all records." This is a very important observation in connection with our present inquiry. Low groups together the Kerry, the Chillingham, the Highland, and the Welsh cattle. These, according to the view now urged, are all derived from *Bos longifrons*, more or less modified by the imported Roman breed; the Kerry representing the purer *Bos longifrons*, and the Chillingham and Ayrshire more nearly representing the Roman type. The long-horns, from which Low thus distinguished all the old native breeds, were a later introduction of which no traces are found with Roman or early medieval remains. They are derived from the German breeds brought over from the continent in later medieval times.

There are some, I have no doubt, who will see in the long forward slouching horn of some Welsh cattle evidence of descent from the Urus; but, in the first place, it must be remembered that these characters appear only in castrated animals; and, secondly, that they are found only in the line of advance of the English along the south and less commonly along the north-west of Wales, and point to the gradual introduction of German cattle, which may have in them some of the blood of the Urus.

XII.—*Medieval Reversion to type of Bos longifrons.*

During the Roman military occupation the farmers lived in security through the length and breadth of the land. Careful selection, and enclosure, and tending

[a] *The Domesticated Animals, &c.*, 369.

of cattle were possible, and the better Roman type prevailed. But, when the legionaries were withdrawn, and the invading hordes of Teutonic or Scandinavian race made it impossible for proprietors to live as before in the rural districts and attend to the improvement of stock, as we have remarked above, the best bred cattle were driven away to the north and west, and the cattle which were left soon degenerated, the towns became larger, and the population generally lived within fortifications of some sort. The bulls roamed over the open pasture and there was soon a reversion to the type of the native breed, which was, even in this part of the island, always numerically stronger. For we must remember what raiding was in those days; 100, or 1,000, or more, head of cattle were driven away at once, quite enough to determine the character of the breed in the country into which they were taken. The same thing was going on in Cæsar's time in Germany, and is going on still in Africa and many other parts of the world. The cattle which had been improved were driven away with the Romanized British, or afterwards carried off by them into the far west and north, and have there been preserved to the present day in the Welsh and Highland breeds. These represent the native stock crossed by the cattle imported by the Romans, while in some enclosures the more pure Roman breed was preserved.

As might be expected, therefore, we find in medieval refuse pits or town ditches where rubbish was shot that the horn-cores and other bones of oxen belong to a breed very like the Celtic short-horn.

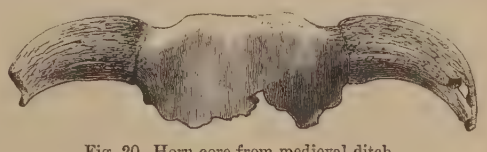


Fig. 20. Horn-core from medieval ditch. Woodwardian Museum, Cambridge.

In the ancient ditches cleared out in digging for the foundations of the new buildings in Sidney Street, Cambridge, and in Petty Cury, or for those of the University Press extension buildings in 1892—1893, out of over 125 horn-cores there were none that could be referred to a long-horned breed, and few that showed any traces of the Roman type. The associated pottery referred these to a date between the twelfth century and the fifteenth.

In some of them we find a very strong development of the occipital ridge, an almost bison-like protuberance in some cases. There is occasionally a large flattened but still short stumpy horn, and sometimes among these a more obviously pedunculated core; and, although we must admit the possibility of the occasional introduction from the Continent of breeds already considerably modified, such as might for instance have a cross of the *frontosus* or of the

brachycephalus type, or even of the Gayal, still there does not appear to be any such numbers of these modified forms as would point to any extensive importation of them, or any such constancy of character or regularity of distribution as would lead us to refer the variations to design, but rather such as would suggest the unstable condition of a mixed breed reverting sporadically to various primæval types, but principally to the numerically predominating *Bos longifrons*.

I showed my collection of medieval heads and horn-cores to several agricultural friends, asking them if there was anything in it that struck them as peculiar, and all agreed on this point, that the cores belonged to one breed of small short-horned cattle. I have given a fuller account of them in my papers on the *Mediaeval Ditches of Cambridge*.[a]

XIII.—*Long-horns.*

The next change in the character of our cattle was due to the introduction of the Friesland oxen and the other long-horned animals from Jutland and the Lower Elbe which went on at intervals from the fifth century. Out of these, slightly modified by a French element among the cattle introduced by the Normans, arose our large party-coloured breeds from crosses of which with one another, and the cattle previously existing in the island, we have got the fifteen or more varieties that we now possess.

Whether or not we have in the great round-faced long-horns a trace of the brachycephalous type, or of one of its ancestors, we may certainly refer it to a cross with North German and South Scandinavian cattle which came over in somewhat late medieval times. The abnormal and irregular horns which characterise it, being as usual most conspicuous in castrated animals, point to its being a mixed breed.

Interesting examples of this long-horned type have recently been sent to me by my friend Mr. Francis Barclay, of Leyton, in Essex, with the following account. He dug them up on the [Epping] Forest House estate two years ago. The ground slopes gradually from either side down to a small stream, and the horn-cores were found in clayey soil about 14 inches below the surface, arranged longitudinally three abreast, only one layer deep, and at the bottom of drains[b]

[a] *Proc. Camb. Antiq. Soc.*, Jan. 25, 1892, Oct. 23, 1893, viii. 32, 255.

[b] For the use of horn-cores for road-making, fences, etc. see Kalm, *Visit to England*, 1748. Translated from the Swedish by Joseph Lucas. London, Macmillan, 1892 (T. I. p. 406), p. 69; *Proc. Camb. Antiq. Soc.* viii. 273.

running down the slope almost at right angles to the direction of the stream. There were no other bones of any kind with them, and none of them had more than a very small portion of the skull attached to the core. They were discovered in three or more places on the estate by the workmen who were draining the land, and from their condition and various circumstances it was inferred that they had been buried about 200 years ago. They obviously belong to a breed quite distinct from the *Bos longifrons* which the Romans found here, and from the modified *Bos longifrons* which they left here.

Low says of the long-horns: "Their horns were long, and bending downwards, a peculiarity, however, which seemed to give place to the influence of external agents, since at the eastern and southern limits of the breed in England their horns frequently turned upwards, in the manner of other cattle inhabiting these districts." Obviously this modification was due to crossing by the native stock, for Low had pointed out just before that "the two classes retain their character distinct, though naturalised in the same tract of country beyond all records."

Fig. 21. Horn-core from ancient land-drains, Epping Forest. From specimen given to me by Francis Barclay, Esq. Woodwardian Museum.

We must be careful not to infer too much from isolated examples of peculiarities of form in the horns of cattle. The manner in which the curvature can be regulated artificially[a] shows how easily accident might produce modifications. But when we are dealing with large numbers, such as were obtained from the medieval ditches round Cambridge, there is not much danger of mistakes of that kind.

I give a rough sketch of a cow from the herd of Mr. Matthew Hewitson, of Hardendale, near Crosby Ravensworth, in Westmoreland, one of the last of the celebrated long-horn breed. This herd passed into the possession of Mr. Rigg, of Grange, on whose farm one half-bred descendant of the race still lives. He has, however, four stuffed heads which show a remarkable variety of form and direction in the horns.

That these long-horned German cattle had no cross of the Urus in them it would be rash in the present state of our knowledge to assert. It is almost

[a] See for example R. W. Felkin, F.R.S.E., Notes on the Madi or Moru tribe of Central Africa, *Proc. R. Soc. Edinb.* xii. 303, *et seq.*

certain that the Urus, like all the rest of its genus, could have been domesticated, and that the stories of its being irreclaimable, and of its antipathy to domestic cattle, arose from confounding the Urus with the Bison.

Fig. 22. Long-horn Cow. Hardendale herd. From a sketch by Canon Weston.

That it had no genetic connection with the large-horned cattle of Hungary, and the spiral-horned oxen of Emilia, it would be equally unsafe to assume; for among the long-horns, as well as among the Hereford and the South Wales cattle, in castrated animals especially where the form and direction of the horns becomes unstable, we very commonly find examples reminding us of all these ancient long-horned types. Although we may entertain the possibility of the introduction by the Romans of a long spiral-horned beast, such as is now represented by the Emilian breed, we must bear in mind that no traces of any such animal has as yet been recorded as having been found among Roman remains in Britain, nor do any examples of horn-cores of this type occur among the older medieval remains such as those found in the Cambridge ditches.

The largest of the Forest House specimens measures 10·5 inches round the base of the core, and another fragment measures 13 inches along the outer curve, which indicates a probable spread of 40 inches from point to point; a size far exceeding the largest of those procured from the Cambridge ditches, which cannot have been more than a foot to 18 inches from point to point, according to the amount of divergency in the horns.

Perhaps when attention has been more strongly directed to this most important line of antiquarian research we may obtain further evidence on these doubtful points. At present the subject is almost entirely neglected, and there is no museum in which this line of enquiry can be followed up, and hardly any one which will provide for the safe keeping of such objects if presented to it.

Professor Owen[a] wrote: "My esteemed friend Professor Bell, who has written the history of existing British quadrupeds, is disposed to believe, with Cuvier and other naturalists, that our domestic cattle are the degenerate descendants of the great Urus. But it seems to me more probable that the herds of the newly conquered regions would be derived from the already domesticated cattle of the

[a] *Op. cit.* p. 500.

Roman colonists, of those *boves nostri*, for example, by comparison with which Cæsar endeavoured to convey to his countrymen an idea of the stupendous and formidable Uri of the Hercynian forests."

All the excavations of which I have been able to obtain any record support the view that the larger ancient breeds of Britain are the results of a cross with the cattle introduced by the Romans and the small native breed. But, although some of our existing breeds very nearly represent the pure Roman stock, still the native domesticated *Bos longifrons* is the common form found associated with Roman remains in this country, and a slightly modified form of it is the only ox found among remains dating from the tenth century to the thirteenth. Therefore *Bos longifrons* must be considered the numerically predominant breed down to the time of the introduction of the long-horned oxen from North Germany and the Low Countries, which may or may not have been derived from the Urus.

Professor Dawkins[a] combats the view of Professor Owen that our breeds were derived chiefly from the cattle introduced by the Romans, urging, among other reasons, that "when the Romans conquered Britain, there was no need of their importing cattle from Italy, for they found a breed (*Bos longifrons*) used to the climate, and to the half-wild life which, in a country for the most part uncleared, must have been their lot." *Bos longifrons*, according to him, "is the ancestor of the small Highland and Welsh breeds," and "is essentially the animal with which the archaeologists have to deal." The Chillingham cattle, and the larger breeds of Western Europe, he considers to be descendants of the Urus.

The view now put forward differs, therefore, from that of Professor Dawkins, in regarding the Urus as extinct in Britain before Roman times, and in referring the Chillingham herd and the earliest improved breeds to the influence of the cattle introduced by the Romans. The opinion now advocated agrees with that of Professor Owen in not regarding any of our more ancient domestic cattle as the degenerate descendants of the great Urus, but differs from his view that they were all derived from the already domesticated cattle of the Roman colonists, in that great importance is here attached to the influence of the large herds of domesticated *Bos brachyceros* (*longifrons*) which the Romans found in Britain.

XIV.—*Summary.*

We may take it, therefore, as pretty well established that:

The *Bison* belongs to the Palæolithic Age, but became extinct in Britain

[a] *Quart. Journ. Geol. Soc.* xxii. 392. [b] *Op. cit.* p. 500.

before Neolithic times. No domestic breed can be traced to it. Some difficulties in the history of the Urus are due to the Bison having been confounded with it in early descriptions.

The *Urus* characterises the Neolithic Age, having first appeared in Palæolithic times with the Bison, and having become extinct in Britain long before the Roman occupation.

The *Celtic Short-horn* appeared with the Urus in Neolithic times, lived down to and through the Roman occupation, and thus may be regarded as the characteristic ox of the Bronze age. The Romans improved the Celtic Short-horn by crossing it with cattle imported from Italy. The form of the Roman ox, as inferred from contemporary art, being exactly what was required to produce the modification observed in the later Romanised breed. The characteristics of the Urus nowhere appear among the Romano-British cattle.

The *Kerry Cattle* are the most typical examples in the British Isles of the Celtic Short-horn, while the Chillingham cattle are the nearest representatives of the breed introduced by the Romans.

The *Highland and Welsh Cattle* are derived largely from the Roman breed, with more or less mixture of the Celtic Short-horn.

All the above are whole coloured or shaded.

The *Long-horns*, which appear nowhere with Romano-British or early medieval remains, are the offspring of the large breeds imported from Holstein and the Low Countries in later medieval times. All these, and the stock crossed with them, are apt to be party-coloured or sheeted.

The *Medieval Short-horn*, as found in the ditches, &c. of the eleventh, twelfth, and thirteenth centuries, is a reversion to the numerically predominant native breed (Celtic Short-horns), after the legionaries had been withdrawn and selection and breeding had become impossible.

As the Romans had improved the small Celtic Short-horn by the introduction of Italian cattle with up-turned lyre-shaped horns, so the Germans, by the introduction of long-horns, improved the degenerate breed which was due to the reversion in early medieval times to the native short-horn.

The *Durham and Modern Short-horns* belong to a much later period, and do not come within the scope of this inquiry.

VII.—*The Battle of Bosworth.* *By* James Gairdner, *Esq.*

Read January 24, 1895.

To make a satisfactory study of the story of a battle it is no doubt desirable to visit the field of action and examine it carefully with one's own eyes. Where much time has elapsed and many changes have taken place in the aspect of the country the written records are not always easy to interpret; and where even these are scanty and obscure a large number of open questions will naturally be the result. Such has been the case with the famous battle of Bosworth Field, of which we possess virtually only one narrative, and that not written by an eye-witness or even by an Englishman, but by an intelligent foreigner who settled in England some years after. Polydore Vergil, the first writer of a connected history of England, arrived in this country about eighteen years after the battle, and doubtless gained his information about it from those who had seen and taken part in it. The accounts given by the subsequent English chroniclers, Hall, Grafton, and Holinshed, are little more than translations, a little amplified, of the description given by Polydore. Nevertheless, their additions to the narrative, as we shall see, are not without significance.

More than four hundred years have now passed away since the battle of Bosworth was fought, and great changes are naturally to be looked for, even in an agricultural district, in so long a period of time. In point of fact, the changes that have taken place in this part of Leicestershire seem to have begun at a rather early period after the date of the battle, and to have gone on at a much greater rate than has been usual, we should suppose, in localities where as yet no new towns or suburbs have been formed, where even the distant view gives no evidence of their existence, and where rural quiet is only disturbed occasionally by a passing train. The most marked features of the scene that are due to man are of course the work of this ever-changing nineteenth century. A canal and

a railway, each, in some places, with high embankments, are serious impediments to the eye that would take in the natural aspect of the country; while wooded hills and cultivated plains and well-drained fields would, even if the railway and canal were quite removed, present a scene which neither Richard III. nor Henry VII. could possibly have recognised as the field of their encounter.

Some attempt, however, must be made to realise the physical conditions of the country as it existed four hundred years ago, almost untouched by the hand of man. The little town of Market Bosworth stands upon one of the highest hills of the district. Its church steeple is conspicuous from Ambien Hill two miles to the south, and even from further distances in that direction wherever Ambien Hill does not intercept the view. It was a commanding position, which Henry, perhaps, might have been glad to occupy if he could have reached it, but it was about two miles north of the line in which either army was advancing against the other. So the battle was not fought close to Bosworth, but a little south of it. It must, in fact, have begun in the neighbourhood of Ambien Hill; not, probably, upon the hill itself, but either on the north, south, or west side of it; for different views have been taken as to the precise locality, and the zealous local antiquary Hutton, who devoted much attention to the subject in the last century, even believed that it began upon the hill itself. The defeated followers of Richard were pursued southwards to the villages of Dadlington and Stoke Golding, close to which last (between it and the railway station) is the little eminence called Crown Hill, where the crown which fell from Richard's head in the battle was placed by Lord Stanley upon Henry's.

This crown was said to have been found cast away in a hawthorn bush, a shrub pretty abundant still in the neighbourhood. We must suppose, therefore, that here and there was to be found a little underwood on the field of battle. The land, however, for miles about, must have been generally bare, and much of it moorland. Ambien Hill was, in all likelihood, void of trees.[a] The field of battle itself was called Radmore (that is to say Red-Moor) Plain; that on which Henry encamped the night before was called the White Moors; the way by which he reached it was by Fenny Drayton and the Fenn Lanes. The whole country was uninclosed and quite in a state of nature.

[a] The name is supposed to mean "One Tree Hill." I cannot tell whether the etymology be correct, but if it be so it by no means follows that it refers to any feature which existed in the fifteenth century. Otherwise it fits my argument pretty well, that the hill was long conspicuous for having but a single tree.

Now, why did Henry, Earl of Richmond, endeavouring to oust Richard III. from his kingdom, advance at this time through a fenny country? His course from Wales had been by Shrewsbury, Lichfield, and Atherstone along the Watling Street, the old Roman road to London. But Richard he knew was coming to intercept his march, and even if he could have given him the slip it would have been dangerous, with a much inferior force, to leave an enemy in his rear. He is said to have secured a friendly guide through a wild and somewhat difficult country;[a] and he turned to the left in the direction of Bosworth. He encamped on the White Moors, a mile south of Shenton; while Richard, having marched in long array out of Leicester in the morning, is believed to have taken up his position that evening at Stapleton, three miles off. If so, it would seem that he moved early next morning through Sutton Cheney, where, according to tradition, he harangued his men at a place since called Dickon's Nook, to Ambien Hill.

Unfortunately there is some uncertainty about Dickon's Nook. The place so called now is a low-lying portion of a field at some distance to the back of the old hall. But the name has also been given to a tumulus near Sutton parsonage, much more convenient, certainly, as a place from which to utter a harangue. Hutton thought it was here, on the other side of the village, or on a spur of Ambien Hill, that the harangue was delivered. But there are traces above the low-lying field of what look not unlike earthworks; and it may even be questioned whether it was not here, rather than at Stapleton, that Richard encamped for the night. Earthworks no doubt there seem to be at Stapleton as well, though they were more distinct in the last century; and according to Hutton they were so extensive that it would have required two or three days' labour to throw them up. But this, if true, is really fatal to the theory that they were the site of Richard's encampment; for instead of days the army could have had but an hour or two to make them before night fell on the 21st. Moreover, Stapleton seems just a slight degree out of the way if Richard was advancing from Leicester to Atherstone against Henry; for the old road from Leicester by

[a] Burton, in his *Description of Leicestershire* (p. 158, 2nd ed.), says that his great-great-grandfather, John Hardwick, of Lindley, near Atherstone, a man of very short stature, tendered his services to Henry at Atherstone as a guide, and advised him in the attack, and how to choose his ground and profit by the sun and wind. No doubt some one did advise him in these matters; but as Hutton (p. 65) remarks, there is no evidence that John Hardwick was rewarded for his pains.

Peckleton and Kirkby Mallory (as I am informed by an old inhabitant) passed between Stapleton and Sutton Cheney without touching either; and if there was no road at all Sutton Cheney lay much more in the direction Richard ought to have gone to meet his foe. Moreover, if Richard spent the night at Stapleton it is difficult to understand why in the morning he did not march direct through Dadlington against his enemy at the White Moors; for Ambien Hill did not in that case lie between the two armies at all. But it is quite certain that Richard's army occupied Ambien Hill in the morning, and that Henry was not menaced with any attack from the direction of Dadlington.

If, however, we suppose that Richard encamped at Sutton Cheney, nothing could be more natural than that his army should have occupied Ambien Hill, as they did, pretty early on the morning of the 22nd, seeing that it was on their way, and from thence they could easily look down upon Henry's position at the White Moors. It is reported that Richard himself slaked his thirst that morning at a spring on the side of the hill which has since borne the name of King Richard's Well. Henry probably was slower in his movements for more reasons than one; but his line of route has not hitherto been distinctly traced. Only this piece of information we have to guide us, that in the words of Hall:

> Betweene both armies ther was a great marrysse; which th'erle of Richemond left on his right hand, for this entent that it should be on that syde a defence for his part; and in so doyng he had the sonne at his backe and in the faces of his enemies.

This information would have been more valuable if we had any positive statement as to the precise time of day at which the action began; but we can hardly doubt that it was in the early morning, or at all events some time before noon. The 22nd August in the fifteenth century would correspond with the 31st in the Gregorian calendar now in use; on which day the sun rises at about a quarter past five. No doubt men in both camps were astir by six o'clock; but we must allow some time for Richard to move, perhaps to harangue his soldiers (though the oration attributed to him is of course a mere composition of the chroniclers) and to occupy Ambien Hill, while Henry, too, had to shift his quarters, though perhaps not very far, in order to take up his new position. By seven o'clock, no doubt, all this might very well have been done; but if at that hour the sun was directly at the back of Richmond's army, the men must have been facing only a few points north of westward in a position nearly due south of Ambien Hill. Now, it is just possible that there may have been a marsh in that

quarter, though the indications of it are not very distinct; but it is quite inconceivable that Richmond's army should have marched from the White Moors into such a position and then turned round to face an enemy in the west, when the royal forces, as we know, came from the east to meet him. On the other hand if we place the marsh, as Sir James Ramsay does, among "the low-lying swampy meadows to the north of Ambien Hill," we must defer the battle till the afternoon, and perhaps rather late in the day, before we can get the sun at the back of Richmond's soldiers at all. Moreover, they would even then lose this advantage more and more the further they proceeded in their circuit; and finally when it came to the encounter they would have the sun actually in their faces, while the royal forces, to whom they were opposed, would have it at their backs. Thus the positions would be exactly the opposites of those described.

I do not quite know how Sir James Ramsay would vindicate the view that he has taken. He clearly cannot bring it into strict accordance with the statements of Hall and Polydore, and apparently he considers, as I do myself, that the battle was early in the morning, not late in the day. But it is not in the beginning of the circuit, but at the end of it, that he thinks Henry's troops, as he says, "had partly got rid of the sun, which till then must have shone in their faces." According to his map they had proceeded nearly due north from the White Moors to Shenton, then north-eastwards till they had got clear of the marsh, when they turned round somewhat towards the south and faced southwards. Now it may be fairly conceded that if the action took place say at seven o'clock in the morning the sun would then be rather less in their eyes than when they were making the circuit. But partly getting rid of the sun is one thing; having it at your back is quite another thing. Moreover, even at this hour the enemy would have had it at his back; so that the advantage would have been with him and not with them.

I must confess, however, for my own part, that what seems to have been a difficulty to Sir James Ramsay is one to me also; for I do not myself see any position in which the two armies (at least, the main bodies) could very well have met, with the sun at the back of Henry's forces and shining in the face of Richard's. The contrary could easily have been the case, and in fact must have been the case at one time during the engagement. It is evident in the nature of things that an army coming from the east in the early morning must have had this advantage over an army coming from the west, unless by some divergence from the direct route the latter could induce the former to make a circuit and attack him in a position chosen by himself. And this I believe Richmond

not only attempted to do, but very likely succeeded in doing. In no other way could Hall's words have been altogether justified.

It should be observed, however, that Hall's words about Richmond having the sun at his back and in the faces of his enemies convey just a trifle more than the words of Polydore Vergil, of whose history, here and in other places, he simply gives us a loose translation. Polydore does, indeed, say that Henry left the sun at his back, but he does not tell us that it shone in the faces of his enemies; which perhaps was no more than an obvious inference on Hall's part on the supposition that he was facing his enemy at the time in question. It is desirable, however, to go to the original source of information, and I therefore quote the corresponding passage as it stands in Polydore, and with it the sentence immediately following for a reason to be shown presently:

> Inter utrumque exercitum intercedebat palus, quam Henricus de industria ad dexteram dimisit, ut suis instar munitionis esset: simul etiam id faciendo solem a tergo reliquit. At Rex, ubi vidit hostes præteriisse paludem, suos impetum in eos facere jubet.

No doubt the first of these two sentences may be understood in the way that Sir James Ramsay understands it, viz. that it was in the operation of wheeling round the marsh in order to face the enemy that Henry left the sun at his back. But such a view is quite incompatible with any possible topography of the positions, and I cannot help thinking that it was in going along the marsh, not in wheeling round it, that we are to understand Henry had this advantage. Moreover, the second sentence, if he did wheel round the marsh at all, may perhaps suggest, by the use of the word *at* (*i.e.* but), that he lost this advantage in doing so. But most probably the words only mean that Richard waited till the enemy had got to the end of the marsh and there was no longer this obstacle between him and them to prevent the commencement of hostilities.

Now, if this be so, the marsh must have been on the west side of Ambien Hill and not upon the north. It lay, I believe, between the armies, as Polydore places it, even when Henry was encamped at the White Moors, and the distance between him and it was but a few hundred yards. In this brief march his men would have had the sun, any time in the morning till about nine o'clock, a little in their faces. But the marsh prevented further approach to the enemy in a direct line, and Henry purposely turned to the left, leaving it on the right and the sun at his back. The marsh, I believe, extended more than a quarter of a mile in length, and during his progress along it he was pretty secure from attack, so that he does not seem really to have been attacked at this time at all. But when

he came to the end of the marsh he would either have to turn and face the enemy with the disadvantage of having the sun in his eyes, or simply to make a stand and let the enemy come down the hill and attack him. I think he did the latter, and that if a detachment of the king's army came down the hill to oppose him, they would have had to make a circuit before coming to close quarters and then have the sun in their faces. But the actual commencement of the engagement, I believe, was by a discharge of arrows from the hill. So that Hall's words about the sun being in the faces of the king's men can hardly have been true at the beginning of the action, although it is true enough that the Earl of Richmond's followers had it at their backs on their way alongside the marsh.

But it would be wrong not to say a word or two about Hutton's view, who seems to have taken it for granted that the marsh was on Ambien Hill itself and not by the side of it. He actually believed that the Earl of Richmond's army was allowed to climb the hill, and that the marsh which divided the two hosts was mere spongy ground saturated with water from the outflow of King Richard's Well! "A small discharge of water," he says, "flows from the well directly down the hill through the wood into the rivulet [the Sence rivulet], but having no channel cut for its passage it penetrates through the soil and forms that morass which Henry is said to have left on his right." [a]

Strange, that this small discharge of water from a well should have created in those days an impassable barrier between two armies! But Henry and his forces must have already climbed a good part of the hill, as indeed Hutton expressly says they did:

"Richmond . . . . . slowly marched up the ascent where the wood now stands, the morass formed by King Richard's Well being on his right, and the sun, not on his back or his right hand, but between both; the king's troops looking on with their bows bent." [b]

The good antiquary saw it all quite clearly in his mind's eye. There was the marsh, actually existing in his day, formed from the overflow of the well. It was impassable, and neither Henry nor Richard had as yet got his forces round it above the well. But Richard ordered his men to wait with their bows bent till Henry had passed the marsh (would not even arrows traverse it?), which he could only do by going higher up the hill above the well. Such were the notions as to the conflict which Hutton seems to have carried away with him after a visit

[a] Hutton's *Bosworth*, 69.

[b] *Ibid.* 97.

to the field of Bosworth in 1788. Poor man, his ideas were somewhat disconcerted when he revisited the spot in 1807. Nineteen years had made so great a change in the locality that he found himself quite lost; and he wrote that King Richard's Well was then "nearly obliterated," the swamp where he fell was "become firm land, and the rivulet proceeding from it lost in an under-drain."[a]

Apart from all other objections to his rather extraordinary view of the military manœuvres, Hutton, if he had read carefully all that was said by early writers on the subject, would have found that a marsh or boggy ground existing in his day could not possibly have been the marsh which divided the two armies; for the latter had been drained as early as the reign of Queen Elizabeth. So Holinshed expressly tells us in a parenthesis inserted by him in the old account of the narrative derived from Hall:

> Betweene both armies there was a great marish then (but at this present, by reason of diches cast, it is growne to be firme ground), which the earl of Richmond left on his right hand.

It is interesting to note here one little indication of the improvement that had taken place in the country under Tudor rule. A marsh which had separated two armies in 1485, and was probably of considerable breadth, had entirely disappeared about a hundred years later, when men were evidently reclaiming for cultivation much of the barren moor that lay around. But the site of this marsh concerns us at present. Where are we to place it? One condition of the problem is that it shall be firm ground now. Another is, as we have already seen, that it shall lie between the White Moors and Ambien Hill. A third, of course, is, that it shall be level ground in which water may possibly have lain at one time. These conditions do not well apply to the hollow ground indicated by Sir James Ramsay near a feeder of the Sence brook, north or north-west of Ambien Hill. But they do agree remarkably well with the character of some fields just beyond Bradfields Bridge and the lodge of Shenton Park on the way southwards from Shenton Station. The field even on the left hand of the road is lower than the adjoining canal, while that on the right hand, about 200 yards after passing the lodge, is remarkably level, and looks as if it had been once covered with water.

This field, and no doubt the other with it, before a road was made between them, could easily have been drained into the Sence Brook, a few hundred yards off, when the operation was once resolved on. Here then, I take it, was the

[a] Hutton's *Bosworth Field.* Advertisement at the beginning of the second edition, p. iv.

marsh, and Richmond's army must have marched along it northwards, through the borders of what is now Shenton Park to a point about four hundred yards south-west of Bradfield's Bridge, where it would come to an end, and they would be exposed to the enemy's attack. On their way from the White Moors they had only crossed the Sence, not a much greater obstacle,[a] probably, in those days than now, and they had the advantage of doing it unmolested. But Henry, I believe, proceeded slowly, not only from a politic desire to keep the marsh between him and his opponents as long as possible, but also for another reason which we shall see presently, and it may have been nine o'clock before the action began.

As soon, however, as he had passed the marsh, or perhaps had come to the end of it, his experienced enemy ordered the attack, and a shower of arrows poured down from Ambien Hill on Henry's van, which was led by the Earl of Oxford. The archers in Henry's rear at once replied, and though they were not so numerous as those of Richard's army they seem to have been supported by an arm of which the king's forces were destitute. Cannon balls were dug up during the last century upon the field of battle. Hutton says they were found "in Hewit's garden;" and from the plan of the battle-field engraved in his book, it would seem that Hewit's cottage, then uninhabited, occupied pretty nearly the site of a house on the brow of the hill, now used as a parsonage house by the incumbent of Shenton. The guns from which they were discharged were doubtless in the rear of Henry's army on the other side of the marsh, perhaps half a mile off, on the plain below; and though they could not have been ordnance of the heaviest kind they were certainly heavy enough to be some impediment to Henry's movements. Where he got them is a matter of speculation, on which I shall have a word to say presently.

His day's march had generally covered about twenty miles on an average, but latterly it could not have been so much as half that distance; for it is certain that he rested one night at Lichfield, and also that his army had encamped at Tamworth, just eight miles further on, that night that he lost his way in following them from Lichfield, and the next stage, Atherstone, was about eight miles further, and not quite seven from the place of his encampment on the eve of the battle. Only twenty-three miles in three days. So that we may well believe that he had encumbered his progress with an arm likely to be useful to him on the day of battle; and, further, that his foresight was justified by the event, for

[a] Both armies must have crossed it after the battle, even in the hurry of the flight and the pursuit, a quarter or half a mile further up.

the king's army could not possibly have dragged up Ambien Hill such guns as were employed against them.

This is no matter of speculation, for the cannon balls that were dug up on Ambien Hill are now in the possession of Mrs. Park Yates, of Sandiway, Northwich, Cheshire. And I have been privileged to see them. They are four in number, all of different weights. The first is of lead and weighs 14¾ pounds, the second of iron, weighing 8½ pounds, and the third of iron (with a screw), weighing 4 pounds. The fourth is of stone, much larger than any of the others, but comparatively light. The gun which discharged the heaviest of these balls must have required at least eight horses to draw it.[a] It was probably the kind of piece called a culverin, or perhaps a "sacre," the smaller guns being "falcons," or "falconets." The possession of even two or three such pieces was manifestly a great advantage to an inferior force.

It is true that in the slender accounts of this battle given by the early chroniclers there is no distinct mention of cannon; still less do we find it stated by any writer, early or late, that the guns were only on one side. But the fact that guns were used was certainly an early tradition of the battle. Thus we read in the account given of it in Drayton's *Polyolbion*:

> So through the misty smoke
> By shot and ordnance made, a thundering noise was heard.

And still earlier, in the Song of the Lady Bessy, which, though it went through

[a] The following extracts from Tartaglia's early treatise on artillery (pp. 27, 28) show the weights of some of the pieces of ordnance as compared with that of the balls used for them in Henry VIII.'s time:

"A faulconet whose pellet of leade weigheth 3 pounde waight is 5 foot and ½ foote long, and commonly containeth 400 pounde waight of mettall, and must be drawne with two horses.

A faulcon whose pellet waigheth 6 pound waight, being 7 foote long, containeth 890 pound waight of mettall, and must be drawne with foure horses.

A saker whose pellet wayeth 12 pounde waight, being 8 foote long, containeth 1400 pound waight of mettall, and must be drawne with eight horses.

A saker whose pellet wayeth 12 pound waight, being 9 foote long, containeth 2150 pound waight of mettall, and must be drawne with ten horses.

A saker whose pellet wayeth ten pound waight, being 8 foote long, containeth 1300 pound waight of mettall, and must be drawne with sixe horses.

A culvering whose pellet of yron wayeth sixteen pounde waight, being 7 foote and ½ foote long, containeth 1750 pound, and must bee drawne with eight or ten horses.

A culvering whose pellet wayeth 14 pounds waight, being eight foote and ½ foote long, containeth 2233 pound waight of mettall, and must bee drawne with five yoke of oxen."

It is unnecessary to quote the proportions of heavier pieces.

many variations, must have been composed originally when the story of Bosworth field was within the memory of living men, we read as follows :

> Then they blewe up bugells of brasse.
> The schottes of gunnes were so feirce
> That made many wyves to crye alas!
> And mony a childe fatherles.

And even Hall, who is almost contemporary, in describing the action, uses the expression "the terrible shot once passed, the armies joined." It is true that, in the passage immediately preceding nothing whatever is said about guns but only about arrows. Still, I think gunshot is in this place what we are meant to understand by "shot," for Hall is here translating Polydore as usual, and the clause is an insertion as if to supply an omission. Moreover, the cannon balls found on the field could not have fallen there in any other recorded battle. And further, from the position in which they were found, it is quite clear that they must have fallen in the midst of Richard's forces, so that the guns must have been in the Earl of Richmond's army. Lastly, it is perfectly certain that Richard could not have had any similar guns, because he had marched fully fifteen miles from Leicester the day before, and even if he had succeeded in carrying ordnance with him over such a distance within the time, he certainly could not have got the guns up such a steep ascent as Ambien Hill, where he had taken up his position.

But where could Henry have got the guns? For an answer to this question we may doubtless be referred to Comines, who tells us[a] that when the Earl of Richmond left France he was furnished by Charles VIII. not only with a body of men and a sum of money for the expedition but also with some pieces of artillery. And it is probable enough that some of the guns in Henry's army at Bosworth came from France. But certainly guns that could carry a ball of over fourteen pounds weight could not have been carried with him all the way through Wales, seeing that he had been marching from Milford Haven to Shrewsbury at an average rate of at least twenty miles a day. It would seem, therefore, that the larger pieces, at least, must have been procured somewhere upon the road. Where could it have been? At first sight the question seems a puzzle. But there are some points which suggest a probable answer. For it is quite clear he could only have obtained them from some fortified place, and that place could not have been many days' journey from

[a] Book V. ch. xviii.

the field. Now, there was an old castle at Tamworth, which, it is clear, since it offered no resistance to his army, must have quietly surrendered when they occupied the place on the evening of the 19th August, and the guns could have been got from thence to the White Moors, a distance of only fifteen or sixteen miles, by nightfall on the 21st. The owner of Tamworth Castle was Sir Thomas Ferrers,[a] who inherited it from his mother, Elizabeth Frevile, and who died in peaceful possession of it in the fourteenth year of Henry VII.[b] How he conducted himself at this particular juncture is not distinctly recorded. In earlier years he had been a stout Yorkist. He had been taken prisoner at Wakefield and had been made a Knight of the Bath by Edward IV. But that Richard soon after his accession began to mistrust him appears to be indicated by this, that, while his name occurs in repeated commissions of the peace as well as other commissions for Warwickshire in June, July, and August, 1483, the first three months of his reign, it is omitted in a commission of the 5th December following, and does not appear again during the remainder of the reign.[c] And we are at no loss to account for a state of suspicion between him and the usurper; for he had married a sister[d] of that Lord Hastings whom Richard just before his accession had sent to summary execution. A brother-in-law of Hastings could not have been expected, as justice of the peace, to be very eager to suppress disaffection to Richard III. But it is more remarkable that under Henry VII. his name does not appear in commissions of the peace again. For he had been in the commission for Warwickshire under Edward IV.[e] as well as at the beginning of Richard's reign. It would, therefore, seem that, though he disliked King Richard, he was too good a Yorkist to feel kindly towards Henry, and though he was guilty of no treason (otherwise he would not have died in possession of Tamworth Castle) he was not considered a safe man as justice of the peace even by Henry VII.

Now, even though he got no great thanks for doing so afterwards, it is quite conceivable, and, indeed, highly probable, that a brother-in-law of Hastings,

[a] See Dugdale's *Warwickshire*, p. 1135-6.

[b] Inquis. p. m. 14 Hen. VII. No. 10.

[c] See Calendar of Patent Rolls in Ninth Report of Deputy-Keeper of Public Records. Patent 1 Ric. III. p. 1, m. 5 *d.* (26 June), m. 8 *d.* (30 July), m. 7 *d.* (9 August), m. 10 *d.* (5 Dec.); also pt. 2 m. 2 *d.* (1 August).

[d] Dugdale's *Baronage*.

[e] His name is on the Commission for Warwickshire on the dorse of Patent Roll 22 and 23 Edw. IV., Part I., and doubtless in earlier rolls.

on the approach of Richmond's army, would have quietly given up Tamworth Castle to the king's enemy. And certain it is that Tamworth opposed no serious obstacle whatever to Henry's march. But it is not at all so clear that Henry calculated on its easy surrender beforehand; and a well-known incident in his progress becomes, I think, a good deal more intelligible on the supposition that he was uncertain on this point. The story is given by Polydore Vergil and after him by Hall. Henry, we are told, after his departure from Lichfield for Tamworth, although he was receiving daily accessions to his army, was in great anxiety about the attitude of Lord Stanley, who he knew did not dare at once to declare himself in his favour, and he was further made uncomfortable by a report, quite contrary to what his friends had assured him, that Richard's forces were in the best possible array and discipline.[a] Much occupied with these thoughts he allowed his men to go on before him to Tamworth, while he himself followed with twenty light horsemen. The distance from Lichfield to Tamworth is but eight miles, not half a day's easy march; but there was probably considerable delay before starting, for which it is not difficult to suggest a reason. Some messengers, we may almost be sure, passed between Richmond's followers and the custodian of Tamworth Castle, just to make sure of friendship or neutrality; for there was really no need of going to Tamworth at all but for the danger of leaving a hostile fortress in their rear. Richmond and his followers could otherwise have passed on by the Watling Street in the direction of London, leaving Tamworth about two miles to the north of them. Richmond's army, however, having ascertained as far as possible that they would not be opposed at Tamworth, probably marched thither in the afternoon, and some further time was no doubt lost on the way by the reception (midway, as we are told, between the two places) of the companies of Sir Walter Hungerford, Sir Thomas Bourchier, and others, deserters from king Richard. Thus it happened that the day was far spent, and Henry, with his twenty horsemen following in the rear of his army, was so late upon the road that they got benighted and mistook the way, losing all traces of the route the troops had taken. Here Hall, somewhat enlarging upon Polydore, who only speaks of the earl's unwillingness to ask questions of any one for fear of falling into a trap (*ne in insidias incideret*),

[a] "Licet magno esset animo, et ejus copiæ passim augerentur, tamen in timore non parvo erat, quod nihil certi videretur sibi polliceri posse de Thoma Stanlejo (qui, uti demonstravi, propterea quod a Ricardo periculum filio metuebat, neutro adhuc inclinabat) et de Ricardi rebus, longe aliter ac amici significarant, nuntiaretur nihil firmius esse, nihil paratius." Polydore Vergil, lib. xxv.

says "it was showed him that King Richard was at hand with a strong power and a populous army." Such a piece of intelligence could hardly have been conveyed to him at nightfall after he had lost sight of his men; but we may very well believe that even when he left Lichfield he was not without fear that the king's army might be a good deal nearer than it actually at that time was, for Richard had been strangely dilatory in leaving Nottingham to meet his antagonist.[a] And if, perchance, Sir Thomas Ferrers, or the keeper of Tamworth Castle, had any reason to believe that the king was within a day's march of him, all the assurances Henry might have received of friendliness or neutrality on his part might turn out to be delusive. In spite of all the accessions to the strength of his army, the king would certainly have superior numbers, and if Tamworth held for the king it would be a serious check. But what would be his own position with his twenty horsemen, wandering in the dark, if they should unfortunately come too near a hostile fortress? He would have been simply lost. So, when after some wandering he found himself at a little village about three miles from Tamworth, he resolved to move no further till daylight. Hutton[b] thinks he must have diverged to the left from Lichfield and that the village was Whittington, which is about three miles from Lichfield but five from Tamworth. The divergence, however, must have been after he had received Hungerford and Bourchier on the way, and may just as well have been to the right; in which case the village was probably either Weeford or Hints upon the Watling Street.

At daybreak, however, Henry discovered where he was and soon rejoined his army at Tamworth, where he would have found that the castle had offered no resistance. He explained his absence to his troops by saying that he had received some news of secret allies ready to assist him, and thus having turned the incident to his own advantage, again left his friends and went on to meet the Stanleys at Atherstone.

But all this while we have been suspending our story of the battle in order to account for the cannon balls. It is time we came back to the field. The discharge of arrows and of artillery could not have lasted long. There was a limited supply of projectiles of any kind on both sides, and when they were exhausted the two armies encountered at close quarters. Then, indeed, it may have been, though only for a short time, that Richard's men really had the sun in their eyes; for if Henry's men, on coming to the end of the marsh, did not move

[a] See *Paston Letters*, No. 884.

[b] Page 54.

further but awaited the attack of their enemies, there might have been no way of getting at them except by a circuit in which the king's forces would have had to face southwards. And in fact, as we are told, caution was needed at this moment on Oxford's part lest, if he went too far beyond the extremity of the marsh, he should be surrounded, and seeing his soldiers only too eager for the fight, he ordered that not a man should advance ten feet beyond the standard. The sudden rally and concentration of his forces made the enemy, who I suppose had been just coming down by a circuit from the hill, suspect a snare. There was accordingly a momentary pause on both sides, till the earl, perceiving that the king's forces were but half-hearted, set upon them with all his men in close battalion. But we must suspend our account of the action once more to take notice of certain forces outside the two main armies.

Henry's anxiety at the beginning of the day had been deepened by the fact that he did not feel quite sure of active assistance from the Stanleys, notwithstanding his cordial meeting with them two days before at Atherstone, and the plans they had formed together for future action. Lord Stanley, he knew, was obliged to dissemble, as he had been summoned to join King Richard, who had his son, Lord Strange, in his hands as a hostage for his loyalty. His brother, Sir William Stanley, had less object in temporising, as he had already been proclaimed a traitor. But neither of the two at once joined his forces with those of Henry. They occupied positions, I believe, on opposite sides of the field, and though it is difficult to form a decided opinion on such a matter the places indicated by Hutton seem to me very plausible. Lord Stanley had for some days before made a show of retreating before Henry's force and going on to join the king in obedience to the royal mandate. Henry had simply followed him through Lichfield and Atherstone, and very likely the day before the battle, or possibly the second day before it,[a] he had taken the same route that Henry did afterwards to the White Moors, from which a further march of little more than two miles through Dadlington would bring him to a position very near Richard's encampment at Stapleton, if that was really where the royal forces passed the night. Hutton believed that he had seen earthworks at a place called the Bradshaws, between Dadlington and Stapleton, which he took to be the site of Lord Stanley's encampment. They do not seem to be visible now; and it is quite conceivable that the real site of Stanley's encampment is marked by those earthworks at Stapleton,

[a] He and his brother Sir William had held a conference with Henry at Atherstone, which must have been on the 20th, probably early in the day.

hitherto supposed to be Richard's, for he would probably have had more time to make them. The only thing that looks rather against this supposition is the statement of Hall that Lord Stanley had "come with his band in a place indifferently between both armies;" for if the king's forces were at Sutton Cheney, Stapleton was not exactly between, still less could it be called "indifferently between," the two armies, but rather out of the way, and certainly much further from Henry's camp than from Richard's. It is clear, however, that Hall is only loosely translating the words of Polydore Vergil about Stanley, "qui jam ut medius loco pugnæ appropinquarat," which are really quite compatible with the view that he was still a little further from the field than either of the two opposing armies.

But whatever may have been the position, either of the king's camp or of Lord Stanley's, we may take it at least as probable that the latter was somewhere on the south side of the field, where he could receive messages, as he actually did on the morning of the battle, both from the king and from Richmond. He might well be rather nearer the king, for he was endeavouring to the last to maintain the appearance of loyalty; and when Richmond sent to him early in the morning to come to his assistance he sent back word again "that the earl should set his own men in good order of battle, while he would array his company and come to him in time convenient." This temporising answer filled Henry with misgiving; but Stanley was true to his promise, and when he received a similar message from King Richard to join his forces to those of the royal army he flatly refused to obey. His refusal, he well knew, endangered the life of his son, whom Richard actually ordered to be beheaded; and it was probably owing to the urgency of preparation for the fight that the order was not immediately executed. It was useless, however, for Lord Stanley to temporise any longer; so he now drew off his forces and joined Henry at once. He must have carried them back through Dadlington, or more probably through the valley between Dadlington and Ambien Hill, across the Sence Brook, round the marsh. They appeared as a much needed accession to Henry's strength just as the two armies were coming to hand strokes, and they fought in the front by the side of Oxford's company.[a]

Sir William Stanley, who had been already declared a traitor, naturally approached the field in a different quarter from his brother, and did not venture so near Richard's camp as Lord Stanley had done. He for some time surveyed the

[a] "At the which encounter Lord Stanley joined with the Earl." Hall, 418. This is a piece of original information inserted by Hall in translating Polydore.

action from a hill, probably, as Nichols suggests, that called Hanging Hill, near the hamlet of Near (or Nether) Coton.[a] The line taken by his brother no doubt put an end to his own hesitation. But matters had advanced a step further before he joined, and to appreciate the result we should note first the conduct of another actor in the scene, the Earl of Northumberland, who, by all accounts, remained an idle spectator of the conflict. Polydore Vergil, Hall, and the Continuator of the Croyland Chronicle all agree as to this. According to the last-mentioned writer the earl was posted in a part of the field where he found no adversary to contend with;[b] but it seems as if he might have sought the enemy if he had chosen, and the fact that he made his peace with the conqueror after the battle was over and was at once taken into favour shows clearly that he had never any mind to give Richard real assistance. Now where was he posted? Drayton, who knew the ground well, perhaps knew the very spot by tradition; or, if he did not, he at least had heard one thing about it which should help us to fix it. In his account of the battle, speaking of the king, he says:

> He doth but vainly look
> For succours from the great Northumberland this while
> That from the battle scarce three quarters of a mile
> Stood with his power of horse, nor once was seen to stir.

The Earl of Northumberland, if we may trust Drayton, occupied a position about three-quarters of a mile from the scene of conflict. In what direction? Not, of course, in that of Sir William Stanley on the north, or rather west of north, and certainly not on the west, which was the line of Henry's own march. Neither could it have been in the south, if we are right about Lord Stanley's movements; nor yet in the east, the quarter from which Richard himself had come. But it might have been on the northern side of the field to the east of Sir William Stanley's position, somewhere on the road from Sutton Cheney to Bosworth. And here, in point of fact, just about three-quarters of a mile from the foot of Ambien Hill, where the battle raged, a camp is supposed to have existed, which Hutton considers to have been the Duke of Norfolk's. Here, moreover, some weapons were found in the year 1748, which were believed to be such as might have been in use in those days. The spot was just exactly such as might have

[a] See Hutton's *Bosworth Field*, second ed. p. 245.

[b] "In eo vero loco ubi comes Northumbriæ cum satis decenti ingentique militia stabat, nihil adversi neque datis neque susceptis belli ictibus cernebatur." *Cont. Croyl.* 574.

been occupied by a false ally of Richard; for it was little more than half a mile from that in which I believe Richard himself encamped. But why should weapons have been left behind there? It was certainly not a position from which any troops were compelled to fly, and if they were not merely dropped by negligence they were wilfully thrown away by men who did not mean to fight.

A curious expression occurs in the Song of the Lady Bessy, put in the mouth of Lord Stanley when he is represented as planning with Richmond the disposition of the troops before the battle:

> I myself will hove on the hill, I say;
> The fair battle I will see.

Apparently Northumberland "hoved" on another hill; and Fabyan, without specifically naming this northern earl and his followers, uses precisely the same expression in telling us that some stood aloof from the conflict. He says that the battle was a sharp one:

> and sharper shulde have been if the Kynges partye had been fast to him; but many toward the field refused him and yode unto that other partie, and some stode hovynge a ferre of, tyll they sawe to whiche partye the victory fyll.

Before Sir William Stanley joined the battle, Richard saw clearly enough that in spite of his superior numbers he was surrounded by false friends and open enemies, and he determined at once to bring matters to a crisis. Being then on Ambien Hill, perhaps not far from the well at which he is said to have drunk that morning, he was informed by scouts that Richmond was on the other side at no great distance. Putting spurs to his horse he dashed over to the place, and knowing his antagonist by certain indications which had been described to him, he flung himself first upon the little band of personal attendants about him. He beat down Henry's standard, killed William Brandon,[a] the standard bearer, and

[a] Sir William Brandon, as he is called by Hall and the subsequent chroniclers; which led me to suppose when I wrote my *History of Richard III.* that he could not have been killed, as stated, but only knocked down in the battle; for I found Sir William Brandon alive months and even years after. Sir James Ramsay in his *Lancaster and York* (ii. 550, note) has sought to correct my error, which I had already discovered some time before, showing that there were two Sir William Brandons, father and son; but he has made at least one mistake of his own, saying that the survivor was the son, for it was the son whom Richard killed, and I do not know that this son was a knight, as the designation given him by Hall would imply. He was the father of Charles Brandon, Duke of Suffolk, the favourite of Henry VIII., and had been abroad with Richmond in Britanny, while the elder was in sanctuary in England taking refuge from Richard's tyranny. *Rolls of Parliament*, vi. 291-2.

threw to the ground Sir John Cheney, a man of great physical power. Having thus cleared the way, he actually engaged Henry himself in single combat, and would probably have prevailed, though Henry defended himself better than his friends expected, but that Sir William Stanley and his men opportunely came up at that very moment and relieved him from danger.

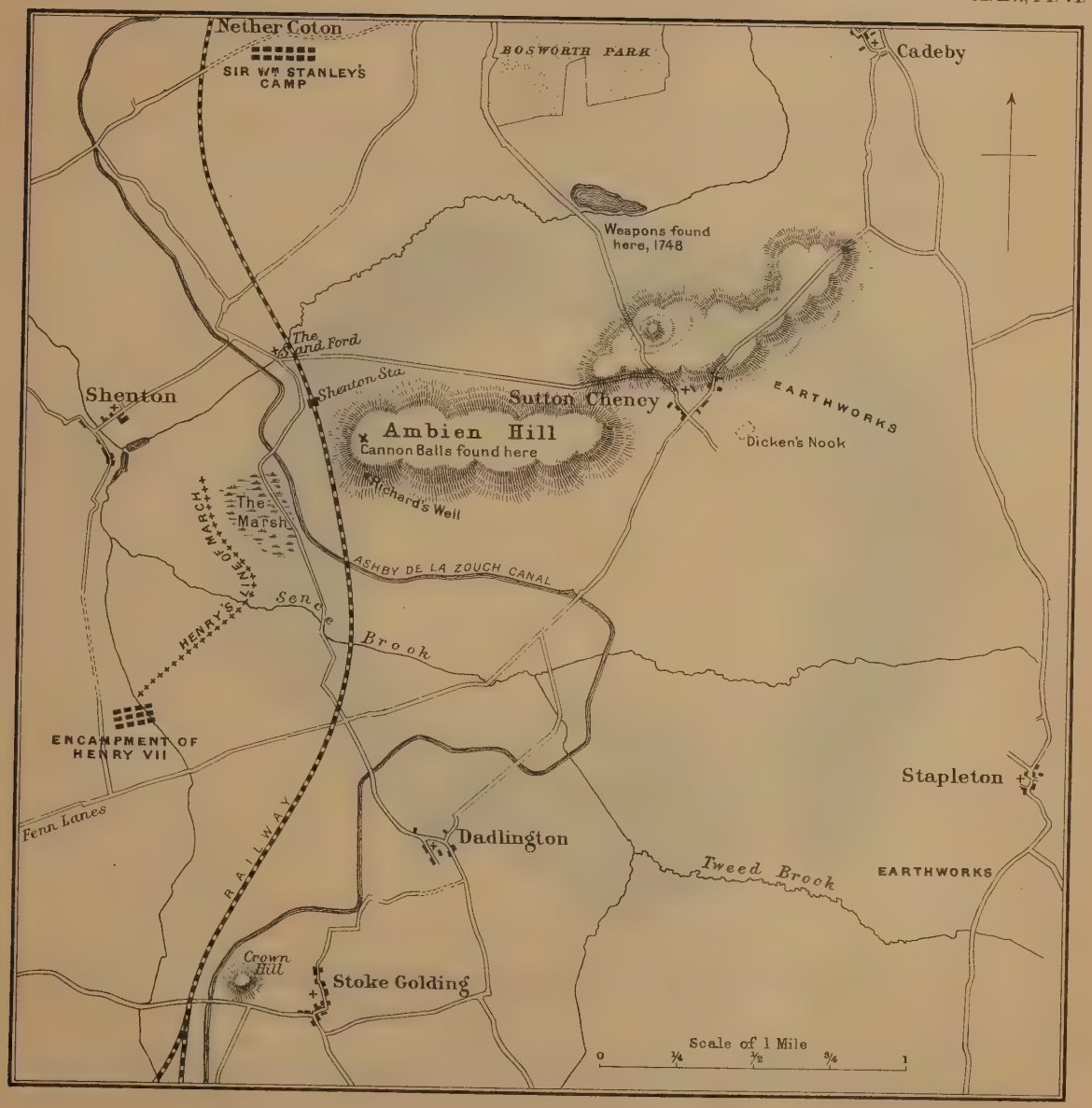
It was Richard who was in danger now, for of course he was soon surrounded. He was urged to fly but refused. He might, perhaps, have drawn back to Sutton Cheney. But he fell in the midst of his enemies, his horse, according to tradition, having stuck in the mire. And this seems highly probable, because the intelligence of the event received immediately afterwards at York stated that he was slain "at a place called Sandeford within the shire of Leicester."[a] There never seems to have been any hamlet thereabouts known by such a name; but the name itself indicates the crossing of a stream, and the exact locality can be pointed out almost with certainty at the present day, although the ford no longer exists. According to a correspondent of *Notes and Queries* (2nd Ser. vi. 391), the old road from Leicester to Atherstone crossed a tributary of the Sence between Sutton Cheney and Shenton, and the ford existed within the memory of men still living. A small part of this old road was identical in its course with a comparatively modern highway which connects the two places last named, but the stream which once flooded it now flows through a vaulted tunnel underneath. Part of this highway, however, which crossed the ford has been known even to our time as "the Sand Road," and it seems obvious that the ford was "the Sand Ford." The name as applied to the road was owing to an immemorial right of the inhabitants of Shenton, before the lordship of Sutton was enclosed in 1794, to take sand free of expense from the north side of Ambien Hill; in doing which they continually passed and repassed the ford.

Now, if we have rightly identified the place where King Richard fell, it must have been almost half a mile north of the termination of that marsh along which Henry's army had proceeded. And, as we are told that he fell surrounded by his enemies, we must presume that Richmond's left, at all events, had by this time pushed so far beyond the marsh, having driven back the first detachments of the royal army who came down upon them by a circuit from the hill. It was then, if ever, that the sun shone, for a short time, in the faces of the royal forces, while Richmond had it at his back. But if so, the attacking party would naturally have been driven northwards, or eastwards towards Sutton Cheney.

[a] Drake's *Eboracum*, 122.

And so, very likely, they may have been; but Sir William Stanley and his men coming down through the fields from Hanging Hill would have driven them southwards again, and being joined in the pursuit, after the king was slain, by the whole body of Richmond's forces, must have chased them, perhaps over the lower slopes on the western side of Ambien Hill, or, it may be, eastward round the hill, and over the Sence Brook as far as Dadlington and Stoke Golding. The work would not have been so easy, but that after Richard's death many of his unwilling and half-hearted followers threw away their arms and submitted. Only those who had little reason to expect mercy fled for their lives. The whole conflict had lasted little more than two hours. But in those two hours the reign of feudal disorder had come to an end and a foundation had been laid for firm and consistent government.

I do not like to conclude this paper without expressing my obligations to Mr. Thomas Harrold, of Hinckley, for kind assistance repeatedly given in local inquiries and in personal inspection of the ground along with myself.



PLAN OF THE BATTLE OF BOSWORTH

VIII.—*On two fibulæ of Celtic fabric from Æsica.*

By Arthur John Evans, *Esq., M.A., F.S.A.*

Read January 7th, 1895.

During the recent excavations on the site of Æsica[a] a remarkable discovery of ancient relics was made. The deposit in question was contained inside the western guard-chamber of the south gate and about 3 feet from its northern wall. Unfortunately the discovery was made in the absence of any trained archaeologist and the data at our disposal are only of an approximate nature. The relics that have come to light consist of two large fibulæ (figs. 4 and 9), a silver collar or chain (fig. 1), a gold Roman ring (fig. 2) set with a moss agate, and another of bronze (fig. 3) set with a nicolo engraved with a gnostic subject, the familiar IAO.

Fig. 1. Silver collar or chain found at Æsica. ½

According to the account given, these objects were found together about 3 feet above the level of the original floor of the room and 3 feet 6 inches beneath the surface of the earth with which the guard-chamber was mostly choked. The dis-

[a] Report for 1894 of Northumberland Excavation Committee, *Archaeologia Æliana*, vol. xvii. pp. xxii.-xxxii. *See* also Mr. Haverfield's notes, *post*.

as I have shown in connexion with the Aylesford discoveries, such a considerable element of Belgic culture was originally derived. It had a wide western distribution as early as the date of the Roman Conquest of Gaul, but the more primitive examples, and those which throw the clearest light on its original evolution, seem, as already said, to belong to a more easterly region. The type is derived from a fibula which, like others of its class, is really a converted pin, the end of which is bent back over its bow, the knob itself being bound to the top of the bow by a metal collar. The stages in this process are well illustrated by two types from the Celtic settlements in Bohemia. In the first example (fig. 5) from the Riesenquelle, near Dux, the retroflected end and the collar are still separate entities. In the other fibula (fig. 6), from the Boian Oppidum of Stradonić, the union of the pin-bow and collar has become more organic, though traces of the old separation are still seen in the line of division on the back. The recurved projection at the foot end of the collar was no doubt originally devised to keep the collar from slipping back. In some cases, as on the Pannonian example (fig. 8), there are two of these hook-like projections curving outwards, one on each side of the collar, and it is to the multiplication and development of these, coupled with the survival of the collar itself, that the bow of this class of fibula owes its typical characteristics. On the Æsica example these elements attain their greatest development.

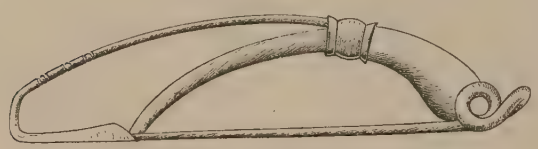


Fig. 5. Bronze brooch with retroflected foot caught by a free collar. From Riesenquelle, Dux, Bohemia. ½

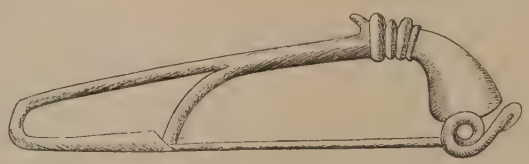


Fig. 6. Bronze brooch with collar and bow in one piece. (The pin and spring restored.) From Stradonić, Bohemia. ½

The type shown in figs. 5 and 6 reappears, in the wake, no doubt, of Celtic influences, in a completely unified form both in Italy[a] and Gaul, though its antecedent stages must be sought outside the limits of pure Italic or Roman culture. In Gaul this type is found in the remains of Bibracte or Mont Beuvray, the predecessor of the Roman Augustodunum (Autun), and of Alesia[b] (Alise St. Reine),

[a] One probably found in the Perugia district is engraved in Montelius, *Spännen från Bronsåldern*, p. 186, fig. 188. But this earlier type is certainly rare in Italy, though a later variety with the foot no longer open but forming a single plate is occasionally found in N. Italy. I have seen examples from Liguria.

[b] *See* Tischler, *Gurina*, 26.

among the relics of the final struggle between Cæsar and Vercingetorix. This fact sufficiently dates that stage in the history of this interesting type when it had already become unified. In Britain it already appears as an imported object in one of the Aylesford graves, which from other associated relics can be shown to belong to the first half of the first century B.C.[a]

In Gaul Roman influence does not seem to have favoured the further evolution of this particular class of fibula; but in Britain, where the indigenous elements were less fully assimilated by the conqueror, it was to play a more important part. It became, in fact, the progenitor of whole series of closely allied forms which characterise those parts of provincial Britain where the Celtic element still retained much of its national characteristics. Certain developments take place in accordance with prevailing fashions: the originally open foot becomes finally closed and forms a single plate; the loop of the spiral spring is caught in a hook on the "head" of the fibula, and a specially British development at the same time makes itself perceptible in the formation of a smaller loop at the end for the convenience of attaching a small chain (fig. 7). These fibulæ were, in fact, worn by the native women in pairs connected by a chain hanging down between them. The same fashion recurs in other parts of the old Celtic area, notably in Pannonia, but the formation of a special loop or eye to catch the terminal rings of the chain is, I believe, a peculiarly British characteristic, and is not confined to this particular class of fibulæ. In both the Æsica brooches, though of very different types, this feature is well illustrated.

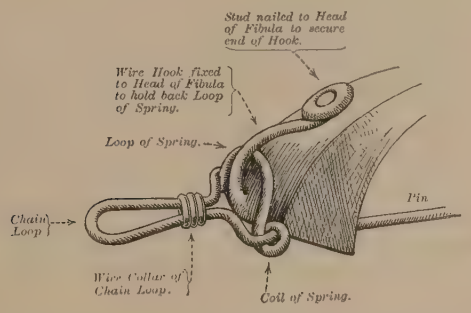

Stud nailed to Head of Fibula to secure end of Hook.
Wire Hook fixed to Head of Fibula to hold back Loop of Spring.
Loop of Spring.
Pin
Chain Loop
Wire Collar of Chain Loop.
Coil of Spring.

Fig. 7. Sketch shewing development of British *fibulæ*. From a specimen from Kingsholm, Gloucestershire, in the British Museum.

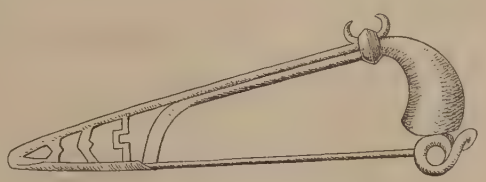


Fig. 8. Brooch of early Pannonian form.

More or less Romanized forms of this originally British, or perhaps we should say Belgic, type are common on various sites in the south-eastern part of our island. But the true British examples are to be distinguished from these by

[a] *See* A. J. Evans, "On a Late-Celtic Urn-Field at Aylesford, Kent, etc." *Archaeologia*, lii. 382, 383.

their more elaborate decoration, in which the Celtic art of enamelling and the triquetral design are special features, as well as by the terminal loop with which they are provided in order to suspend the two ends of the chain. These true British types, which continued after the Roman Conquest, occur only sporadically in the south-east. They are the special product of the west and north, and form one of a series of interesting indications that the Celtic element continued to hold its own in those parts of the Roman province. Various local fabrics of this class of fibulæ can be made out. There are western varieties, such as those found at Kingsholm, near Gloucester, at Caerleon, and Pont-y-Saison, in Monmouthshire,[a] of which good specimens exist in the national and other collections. Some plainer forms are well represented among the fibulæ found at the British village excavated by General Pitt-Rivers at Rotherley, Dorset.[b] But it is the northern types with which we are at present principally concerned. Many examples of a somewhat early variety of this fibula were found with other late-Celtic relics under the foundations of an old bridge over the Troutbeck at Kirkby Thore, in Westmorland. The deposit contained quantities of broken fibulæ and "enamelled buttons," as well as Roman coins, and appears to have been rightly set down by Captain W. H. Smyth (who described it in *Archaeologia*)[c] as an "artizan's workshop." The coins were mostly of emperors ranging from Vespasian to Severus Alexander, including several "Britannias" of Hadrian and Antoninus Pius. It is probable that the representative fibula engraved in *Archaeologia*, which is of an earlier class than the prevalent "Brough type," dates from a time more nearly approaching the age of Vespasian than that of Severus Alexander, and may belong to the end of the first century of our era.

But the most abundantly represented type of these northern fibulæ is that of which a remarkable number of specimens have been found on the neighbouring site of Brough. They are evidently of the same, undoubtedly local, fabric, and their heads are adorned with Celtic scroll-work and enamel. The popularity of this Brough fabric is attested by the fact that specimens of this local class are occasionally found in south-eastern England, and one example[d] was even procured as far afield as Venice. From the close association in which some of the Brough fibulæ of this type seem to have been found, with leaden seals bearing the stamp of Severus, it is probable that they date from the end of the second and the

[a] In the British Museum.

[b] *Excavations in Cranbourne Chase*, vol. ii. pl. xcvii. 9-12.

[c] Vol. xxxi. (1845) pp. 279 *et seqq.* "On some Roman Vestigia recently found at Kirkby Thore, in Westmoreland."

[d] In Sir John Evans's Collection

beginning of the third century after our era. A fine pair of silver and enamelled fibulæ, closely approaching the Brough type, but perhaps representing some other local fabric, found at Chorley, in Lancashire, are now in the British Museum.

But besides these Cumbrian fabrics, there seem to have been other centres of manufacture for this class of fibula in northern Britain. In Dr. Bruce's *Roman Wall* is engraved a remarkable fibula of this class, ornamented with triquetral scroll-work, both on the head and catch-plate, which was found on the site of Habitancium. It is of somewhat larger size than the usual Brough fibulæ, and shows a different ornamentation. Closely allied to it is a fibula now in the British Museum, which seems to have been found at Backworth, a little to the north of Newcastle, which in many respects shows a great assimilation to our Æsica specimen. In this case, as in that of the Habitancium brooch, both the catch-plate and the head of the fibula are ornamented with Celtic scroll-work, the decoration of the plate being on both examples strikingly similar. All that is known regarding the circumstances of its discovery is that it was found with a collection of objects, some of them bearing reference to the cult of the *Deae Matres*, and 280 denarii and bronze coins of Antoninus Pius.[a] One denarius of Antoninus Pius belongs to his second consulship, A.D. 139. This takes us approximately to the middle of the second century for the date of the fibula.

One peculiarity of this type, to which the name of "Northumbrian" may be provisionally applied, is the termination of the foot in a flat cylindrical case, which on the Æsica example almost takes the proportions of a small box. In a smaller form it reappears on a fibula of the same class found at Corby Castle, in Northumberland.[b]

In another respect the Northumbrian type shows a close coincidence of form with the Æsica fibula. The head of the bow namely widens out and is attached to a broad rectangular plate, from which issues the loop to which the chain-ring was to be attached. This rectangular plate is evolved, as can be seen by intermediate examples, from the wire coils which originally confined the neck of the terminal loop. In the Kirkby Thore fibula we already see the coils coalesced into a flattened ring, which in the later type becomes the elongated plate. The

[a] *Archæological Journal*, viii. (1851) 35 *et seqq.* The fibula is engraved on p. 39. For the inscription on the ring referring to the Deæ Matres, see C. I. L. vii. 1299, and Haverfield, *Romano-British Inscriptions*, iii. 158 (in *Archæological Journal*, l. 303), where the objects are said to have been probably found at Backworth.

[b] Less conspicuous examples of the same class are to be seen in the British Museum, from London (Roach Smith) and Farley Heath, Surrey. But in the south of England this type is exceptional and exotic.

main points in which the Æsica specimen differs from that found at Backworth are the absence of the scroll-work on the head of the bow and the catch-plate, and the presence of two knobs, one on the posterior part of the bow, the other, now broken off, on the loop. Of these two knobs, that on the spring of the bow must be regarded as due to a cross influence, or, as German mythologists would say, a "contamination" from another form of British fibula, in which the hook on the back of the bow (which in this case catches the cross-wire or loop of the spiral spring), is secured by an ornamental stud. In the Æsica fibula this cross-wire of the spring is caught by a hook below the plate, as will be seen by fig. 4, so that no exterior hook was needed; but the prevalence of this kind of fastening with the hook and stud, of which an example from Kingsholm, near Gloucester, is given in fig. 7, has left its influence on the Æsica fibula in a purely ornamental excrescence. The stud which originally decorated the chain-loop behind was, no doubt, due to the same suggestion.

The stud on the back of the Æsica fibula is one of its most interesting features. It is coated at the top with a silver plate ornamented with an interlaced scroll of a purely Celtic character. The style of the bosses on the bow is also distinctively late-Celtic, and it would indeed be difficult to find a single feature which is not, on British soil at least, of purely Celtic derivation. The prototype was, as we have seen, already introduced into our island, probably by Belgic influence, before the Roman Conquest. The later accretion of the loop to catch the end of the chain is purely British, and quite opposed to Roman fashion. The great size is equally un-Roman, and only to be paralleled by the fibulæ of some provincials on the Middle Danube, who also seem to have retained to a very large degree their Celtic nationality.

It appears, then, that the fibula (fig. 4) from the guard-chamber at Æsica is of pure British fabric and the outcome of a purely British tradition. On the other hand, its nearest prototype is a Northumbrian form, the fabric of which, from its occurrence at Habitancium, may perhaps be located north of the Wall. The type with which it stands in the closest relation seems, from the coins found with it, to date from the middle of the second century after our era, and, considering that the Æsica fibula seems to represent in its aggrandised proportions and the greater relief of its bow-ornament a somewhat later development of the "Northumbrian" type, we may with great probability attribute it to the end of the second century after Christ.

The other Æsica fibula (fig. 9) is, from an artistic point of view, very superior to the last. Of its kind, it is probably the most fantastically beautiful creation

that has come down to us from antiquity. Here, too, its history is to a great extent written on its face.

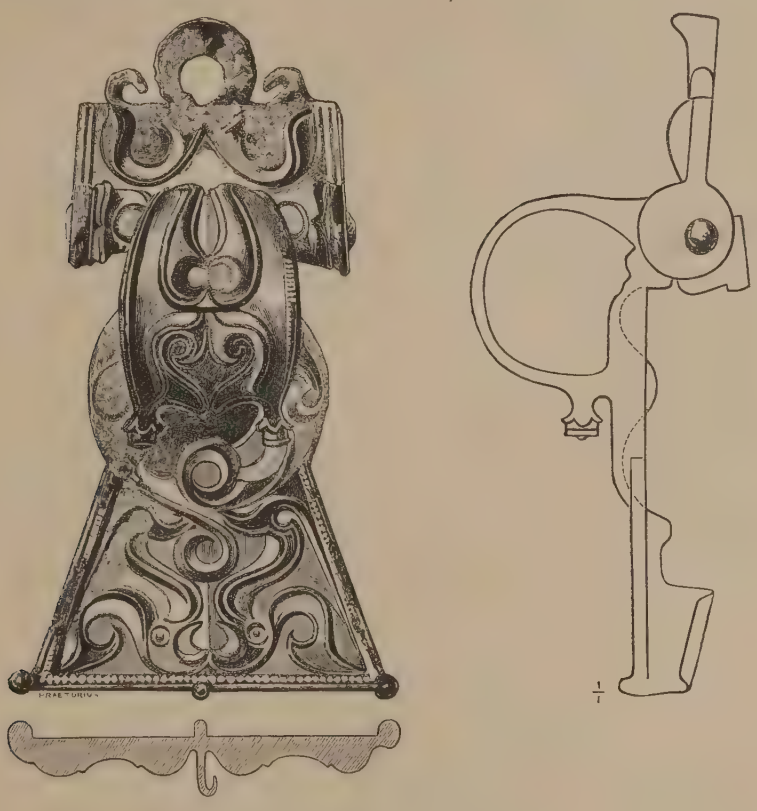


Fig. 9. Gilt bronze brooch found at Æsica.

The prototype from which, in its main lines, it is immediately derived is a form of fibula very widely diffused in France and the Rhinelands, and which, indeed, may be described as a typically Gallo-Roman production. In the case of this fibula the bow is made to go through a more or less circular plate,[a] often ornamented in relief with a kind of open-work rosette. Beyond this disk the foot of the fibula spreads out in a somewhat fan-shaped form. A fine Gallo-Roman example[b] is engraved in fig 10.

[a] In varieties of this fibula, however, its form is lozenge-shaped.

[b] From Sir John Evans's collection. Numerous examples from the Gallo-Roman station of Châtelet, between St. Dizier and Joinville, are engraved in Grivaud de Vincennes, *Arts et Métiers des Anciens*, pl. 40.

This kind of fibula never seems to have been common in Britain, though specimens from time to time occur, and occasionally in sites like Hod Hill and Braughing, where the British element was strong. The fibula itself must be regarded as a later adaptation of a very early type which characterises the Early Iron Age deposits of the Eastern Alps and the lands about the head of the Adriatic, and which goes back, in fact, to the middle of the fifth century, B.C.,[a] and the Late Hallstatt Period of that European region. In this early type the retroflected foot of the fibula is provided with a circular disk, either flat or convex, often attached to the turned-over end of the fibula by a central stud. In some cases the arch of the fibula consists of another similar shield, so that, seen in front, the brooch presents the appearance of two contiguous disks. The fibula with the single disk on the foot is that with which we are more immediately concerned, and this type was very generally used among the Celtic tribes in the fourth and third centuries before our era. For comparison, two examples of this type are given. One is from Grave 33 of the cemetery of Idria di Bača in Gorizia (fig. 11), and probably

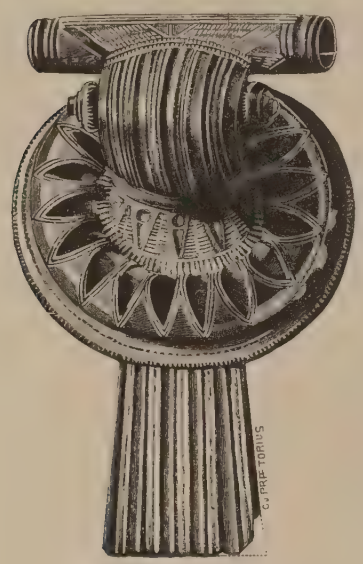


Fig. 10. Gallo-Roman brooch in the collection of Sir John Evans. ½.

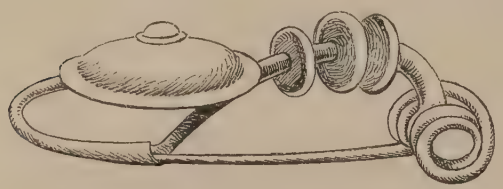


Fig. 11. Brooch from Idria di Bača. ½.

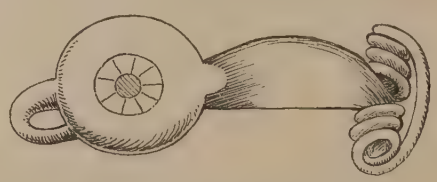


Fig. 12. Brooch from Selzen. ½.

dates from the end of the fifth century, B.C. The other (fig. 12), from Selzen

[a] Thus in a homogeneous deposit found at Hochbühel near Meran, fibulæ of this type are associated with others of the Certosa type, the date of which is fixed by the associated Greek pottery in the Bologna graves to the early part of the fifth century, B.C. Double disked brooches such as those described below were found in a bucket at Nonsberg near Dercolo, in a broken condition, associated with new Certosa fibulæ, a proof in this case of anteriority of date. The evidence of the graves of Idria di Bača, near Gorizia, is also conclusive as to the very early date of the brooches with a single disk on the retroflected end. In Grave 14 one such occurred with a bronze vessel, very similar to that from the cremation grave (No. 500) of the great Hallstatt cemetery. The early date of the retroflected fibulæ in south-east Europe has not been sufficiently taken count of by archæologists.

in Bavaria, is of Gallic work, perhaps of the third century, B.C., and displays an enamelled rosette.

It appears that in the case of some later fibulæ of this kind the simple change was made of passing the bow of the fibula through the centre of the disk in place of the rivet; this change being accompanied by a general flattening and expansion of the foot.

The type which thus originated seems to have been diffused in Gaul at a comparatively early date, and an example is known from the site of Bibracte[a] the remains of which date mostly from the pre-Roman period.

In Cisalpine Gaul it makes its appearance about the same time. Three examples of this fibula were found in the cemeteries of Ornavasso,[b] near the Lago Maggiore, the coins found in which do not reach down beyond the reign of Domitian. Others have been found in the tombs of Martigny in the Canton Valais belonging to the early Empire.[c] Another more or less fixed chronological standpoint is, moreover, supplied by a monument of the Blussus family at Mentz,[d] upon which a fibula of this type appears to be used for fastening the garment of his wife at the shoulder. This monument is referred to by Dr. Zangemeister[e] on epigraphic grounds to the reign of Trajan, and it therefore appears that this fibula was in vogue at the end of the first century of our era. The occasional occurrence of this type on such predominantly British sites as Hod Hill and Braughing, points also to a comparatively early date.

If we now examine the Æsica brooch it will be seen that, though its main outlines are evidently due to this Gallo-Roman type, the relationship which it bears to its model is of the most untrammelled kind. The broad bow of the fibula, instead of burying its whole breadth on the disk below, rests on it by a central support arching away from this on either side to two elegantly moulded knobs. The roll at the head of the fibula which encases the coil of the spring fits on to a broad flat plate analogous to that of the fibula found with it, and from this juts a small perforated projection of ogival form which represents the peculiarly

[a] S. Reinach, Art. *Fibula* in *Darenberg et Saglio, Dict. des Antiquités.* A specimen from this site is in the Museum of St. Germain.

[b] Bianchetti, *I Sepolcreti di Ornavasso* (Turin, 1895), p. 32, pl. x. 18

[c] H. Lugon, *Anzeiger für Schweizerischer Altertümskunde*, 1892, No. 2, cited by Bianchetti, l. a.

[d] Lindenschmit, *Die Alterthümer* etc., band iii. heft ix. taf. 3. Lindenschmit commits himself to the statement that this fibula is common in Rhenish graves of the third century or even later; but this is more than doubtful.

[e] In a letter to Mr. Haverfield, who kindly asked his opinion for me

British loop for suspending the end of the chain. Finally the whole surface of the fibula exhibits, in place of the formal chevrons and parallel lines of the provincial Roman models, a succession of exquisite designs of Celtic scroll-work in relief. The whole is splendidly gilt and in this respect resembles the Teutonic fibulæ of a somewhat later date. The gilding of the Roman fibula is generally of the most cheap and perishable nature.

It will be seen that here again, as in the former example, we have to deal with a purely Celtic production, based, indeed, on a Gallo-Roman model, but a model the origins of which had been Celtic before they were in any sense Roman. The independent relation in which it stands to its prototype suggests the former existence of intermediate links of which the evidence is now wanting. Assuming, as we have some right to do, that the chronological centre-point of the provincial Roman type in question is about 100 A.D., there can be no difficulty in attributing the present fibula (which represents a further development of the Roman form), like the other Æsica example, to the end of the second century of our era.

The other fibula, as already pointed out, when carefully analysed is found to be Celtic in all its elements. In the present case, however, this Celtic character reaches a measure of freedom and originality which places it almost or quite alone among relics found in Imperial Britain during the centuries of direct Roman dominion. It is true that throughout the days of the Roman occupation a true British tradition continued to assert itself in the north and west. The fabrics of Brough, including more than one class of purely Celtic fibulæ, would be alone sufficient to prove the truth of this proposition. But for such an expansive display of Celtic decoration as is seen on this Æsica brooch we shall seek in vain in Roman Britain, at any rate during the later centuries of Roman imperial rule. The Celtic ornament which survived in provincial Britain proper, though genuine, is decidedly subdued, but here we have a specimen of truly flamboyant decoration.

In a word, the art that we here see before us, judging by all analogy, could at the time it was wrought, in the last half of the second century of our era, only have been produced north of the Wall of Antonine as well as of Hadrian.

This conclusion is altogether borne out by the character and details of the decorative designs. The bold relief, the form of the scroll-work, and some of its minutest characteristics, fit on, in fact, to the style of decoration found during this very period on a whole class of Caledonian ornaments. The best represented of these is a series of bronze armlets with embossed ornaments in high relief,

which at each extremity of the open ring enclose an enamelled roundel.[a] These ornaments, of which a specimen from Stanhope, Peeblesshire, is given in fig. 13,[b] are mostly found to the north of the Firth of Forth, and there can be little doubt that they represent a pure Caledonian fabric. The bold style of their relief approaches that of the late-Celtic ornaments of præ-Roman Britain, such as we see them in the deposit of Polden Hill, near Bridgewater,[c] and the somewhat later find of Stanwick, in Yorkshire,[d] which apparently belongs to the last period of Brigantian independence. On the other hand, the character of some of the Caledonian decorative bosses shows affinities with continental types of late-Celtic art, such as, for example, a bronze armlet in the National Museum at Munich,[e] and its beginnings therefore go back to a time before the Roman wedge had been driven home across the Celtic world.

Fig. 13. Front and back views of a bronze armlet found at Stanhope, Peeblesshire. ½ linear.

The Stanwick find affords probably the nearest parallel from the soil of what was afterwards to be Roman Britain, and it is noteworthy that a kind of bifid *vesica piscis*, which on some of the Stanwick bronzes is found in pairs standing for animals' eyes, occurs on the Caledonian bronzes in a purely decorative capacity. What appears to be an outgrowth of the same is the central point of the design on the foot-plate of the Æsica fibulæ.

[a] See especially J. Alexander Smith, "Notes on a Bronze Late-Celtic Armlet," in the *Proceedings of the Society of Antiquaries of Scotland*, xv. 316 *seqq.* Examples of these are cited from Stanhope, Peeblesshire (*op. cit.* xv. 318, fig. 1); Alvah, Banffshire (*op. cit.* vi. pl. iii. and xv. 328, fig. 8, and 329, fig. 9); Castle Newe, Aberdeenshire (*op. cit.* xv. 330, fig. 10); Drumside, Belhelvie, Aberdeenshire (*op. cit.* xv. 333, fig. 14 and 334, fig. 15); Bunrannoch (?), Perthshire (*op. cit.* xv. 336, fig. 16 and 337, fig. 17); Pittkelloney, Muthill, Aberdeenshire (*op. cit.* xv. 340); Kinghorn, Seafield, Fifeshire (*op. cit.* xv. 342); one example has been found near Newry, County Down, Ireland (*op. cit.* xv. 362. fig. 31).

[b] This illustration has been kindly lent by the Society of Antiquaries of Scotland.

[c] *Archaeologia*, xiv. 90.

[d] York volume of the Archaeological Institute, p. 10 and pl. 24. The thin plated bronze buckle of this find is suggestive of a somewhat late date. It approaches the types of the Danish Moss finds, *e.g.* Thorsbjerg.

[e] Lindenschmit, *Die Alterthümer, etc.*, band ii. heft vi. taf. 2, fig. 2.

Direct evidence as to the date of the Caledonian armlets is wanting, but that from Stanhope, in Peeblesshire, was found under some flat stones in company with a late-Celtic horse-trapping and a patella of Roman fabric,[a] which shows that some at least of this class overlap the Roman period in southern Britain.

There is, however, a class described as "thin-plated jointed armlets," in which the designs are executed on the lower relief, and show in their more stylistic foliations a somewhat later development of Celtic art, which, in some respects, corresponds still more closely with the designs on the Æsica brooch. A bracelet or armlet of this kind (fig. 14) was found near the ruins of Plunton Castle, Kirkcudbrightshire,[b] and with it may be grouped a thin-plated bronze diadem found at Stitchel, in Roxburghshire.[c] Perhaps the Æsica brooch may be taken to occupy a place intermediate between the earlier and later decorative style of the Caledonian ornaments.

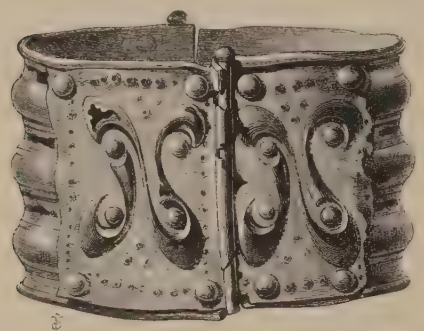


Fig. 14. Bronze armlet found near Plunton Castle in the parish of Borgue, Kirkcudbright. ½[d]

In this connexion it is well to point out that the Backworth fibula, which stands in close relation to the Æsica brooch No. 1, also shows points of contact with certain late-Celtic ornaments from the northernmost parts of Britain. There exists, besides the other two classes of armlets already mentioned, a form of "snake" arm-ring, of which a specimen was found in the Sands of Culbin, Elginshire.[e] The ends of this kind of ring are fashioned into the heads of animals, and in the Culbin example the zoomorphic element is traceable in a pair of fantastic eyes and lines indicative of the hair or mane which recur on other specimens of its class. It looks as if these two eyes had been taken over as ornaments of the head of the Backworth brooch.

It will be seen that though these Scotch relics, which belong to the same late-Celtic school of art, do not afford any such direct evidence of date as may be deduced from the Æsica fibulæ, there is nothing in their case to conflict with the conclusions already arrived at. The Æsica fibulæ belong, as has been shown, to the end of the second century of our era, and the chronological landmark thus

[a] *Proc. Soc. Ant. Scot.*, xv. 316 *seqq.*

[b] *Ibid.* 351, fig. 28.

[c] Wilson, *Prehistoric Annals of Scotland*, ii. 146, fig. 131.

[d] This illustration has been kindly lent by the Society of Antiquaries of Scotland.

[e] *Proc. Soc. Ant. Scot.*, xv. 345, fig. 22, and xxv. 505, fig. 30.

supplied enables us to fix the later class of Caledonian armlets above described, as well as snake rings like those from Culbin sands, to about the same period.

In the history of late-Celtic art in Britain, the Æsica discovery is of high importance as enabling us to put a date to a definite stage of decorative technique. This is the more important since the next approach to a fixed point must be sought in the mixed Saxon and Celtic contents of certain graves in Derbyshire and elsewhere dating from about the sixth century, and to the earliest illuminated and goldsmiths' work of the Irish saints.

To return, however, to the Æsica fibulæ and the circumstances of their deposit. It is evident, from all Celtic analogy and from the terminal eyes or loops with which according to British usage they were both provided, that in each case we have to deal with one of a pair of brooches originally connected with a pendent chain. It might, therefore, be supposed that one fibula of each type is missing from the find. It appears, however, from the record kindly supplied me by Mr. C. J. Spence, that this loss must have taken place before the date of their deposit, and that they were either worn together as an odd pair, or were the share obtained by some individual from a double act of spoliation, Mr. Spence writes: "The fibulæ were found in one lump, and there were (when I first saw them) no traces of others having been attached. There was a good covering of mud, and the back of the gilt fibula bore on its mud a clear impression of the rim on the plate of the other. They had been lashed with string to a piece of wood, the grain of which ran in the direction of the long way of the fibula."

That, however, they were originally intended to be worn in pairs by British women there can be little doubt. An interesting illustration of the manner in which they were worn is, in fact, supplied by a series of Pannonian monuments, of which an example has already been referred to. The prototype of the fibulæ represented on these monuments resembles that of the first Æsica fibula, except that the hook-like projections from the bow, which keep in place the collar binding the retroflected foot to the back, in this case curve inwards instead of outwards (see fig. 8), and finally grow into a kind of arch. The costume with which they are associated and to a great extent the names of women that wear them, bear a Celtic or un-Roman character,[a] and in their great size these Pannonian brooches supply the best parallel to the Æsica fibula No. 1. It is interesting to note that their date agrees with that of the northern examples. They have been found

[a] Hampel, *Pannonische Costumbilder*, Ungar. Revue, 1881, 147-153. This form of fibula also extends to Noricum, Tischler, *Gurina*, 26 note.

with coins ranging from Domitian to the younger Faustina,[a] and reach down therefore beyond the middle of the second century of our era.

The suspicion may certainly cross our minds that the occurrence at the same period of a class of peculiarly large fibulæ among the Celtic border-population of North Britain and of the Middle Danube might not be a purely accidental coincidence, and that the Pannonian troops on the Wall[b] might have contributed to this result. It must, however, be borne in mind that these double fibulæ are female ornaments, and that of the two found at Æsica one is of purely British lineage, the other, though taken from a Gallo-Roman source, has been transformed by a Caledonian artist, and is Celticised in a fashion for which the Pannonian fibulæ afford no parallel. These brooches, at any rate the last, do not seem to have been made by any one living within the pale of the Roman dominion.

The deposit in the Æsica guard-chamber thus becomes the more remarkable. It is useless, indeed, to speculate as to the exact manner in which the relics reached the place in which they were found. We cannot positively decide whether the deposit represented a burial or a hoard of valuable possessions, though the balance of evidence seems to favour the latter hypothesis. All that we can learn from the find is that the owner of the Celtic fibulæ and collar was also the possessor of two Roman rings, but whether the rings represented spoil taken from the Romans by the barbarians or the fibulæ had been stripped from Caledonian wives by a Roman legionary, must remain uncertain. So much, however, we may gather from the circumstances of the discovery, that, at the date when these objects were deposited, at the end, namely, of the second century of our era, the turret was already in a ruinous condition and partly choked with *débris*. The objects are in too perfect preservation, and the find too homogeneous in its nature, to allow us to suppose that they had been placed in their present position at a date much later than that to which the objects themselves belong. Hence it follows that Æsica had already by the days of Severus been ruined by some barbarian incursion from beyond the Wall, and that from that time onwards no attempt was made to restore the western turret of the south gate.

[a] Tischler, *Gurina*, 27.

[b] Pannonians appear in one of the Cumberland forts just south of the Wall (*C. I. L.* vii. 417, *Ephem.* vii. 978), and we have the tombstones of individual Pannonians at Littlechesters (*C. I. L.* vii. 723), and probably at Housesteads (*ib.* 692). (F. H.)

Notes on Excavations at Æsica in 1894. *By* F. Haverfield, *Esq., M.A., F.S.A.*

About halfway between Newcastle and Carlisle the Roman Wall runs for ten or eleven miles along the crest of a high basalt ridge, which drops precipitously to the north. The range of cliffs is broken at several points by small gaps, the largest of which is perhaps that between Cawfield Crags and the Nicks of Thirlwall, where the little Caw Burn finds an outlet southwards to Haltwhistle and the Tyne. West of this streamlet the moorland rises slowly to the Nicks, and half a mile up the gentle slope is the farmhouse of Great Chesters, standing 600 feet above the sea level, in the north-east angle of a Roman fortress. The place is well situated; it has a southern exposure and gains additional protection against north winds from the rounded mass of Chesters Pike, which reaches the height of 800 feet about half a mile to the north. The fortress is of the usual shape, oblong with rounded angles; its northern face coincides with the Wall itself.[a] Internally it measures about 360 feet from north to south and 420 feet from east to west; the side which rests upon the Wall is, therefore, as at Housesteads and Bowness, the longer side. Its area, $3\frac{1}{4}$ acres, agrees with that of Carvoran, Chesterholm, and in general of about half the fortresses *per lineam valli*.[b] Outside, to the south-east lay the usual "civil settlement;" Dr. Bruce mentions a hypocaust as partially exposed in 1867. Further south, 300 yards from the southern face of the fortress, is the vallum, and beyond it the cemetery, indicated, though not precisely fixed, by three tombstones. The water supply, according to Dr. Lingard and Dr. Bruce, was brought from a source north of the Wall by a small circuitous channel. The channel may still be seen, but there was doubtless another and nearer source available at need. The name of the place was *Æsica*, which (Pro-

[a] The excavations of 1895 seem to show that the masonry of the Wall was bonded into the masonry of the fortress wall. In other words, there are indications that the Wall and this fortress were built at one and the same time.

[b] The areas of the fortresses, according to Bruce, are as follows: Birdoswald and Bowness, $5\frac{1}{2}$ acres; Chesters, $5\frac{1}{4}$; Housesteads and Benwell, 5; Halton Chesters, $4\frac{1}{4}$; Wallsend, Carrawburgh, Carvoran, $3\frac{1}{2}$; Rutchester, Chesterholm, Great Chesters, $3\frac{1}{4}$; Burgh, 3; Castlesteads, $2\frac{3}{4}$; Stanwix, $2\frac{1}{2}$; the area of Newcastle is unknown. East of Chesters (inclusive) the north faces of the fortresses project beyond the Wall; west of it (from Carrawburgh inclusive), the north faces of the fortresses coincide with the Wall, or else as at Chesterholm, Carvoran, and Castlesteads the fortress is south of the Wall.

fessor Rhys tells me) is probably not a Celtic word, a remark which applies also to *Hunnum* and *Procolitia*, but not to the other mural place names. The garrison in the third and presumably in the second century was the *cohors ii Asturum*. For the further history of the place we have three dated inscriptions. One mentions Hadrian, and may perhaps record the foundation of the fortress; a second is a fragment of about A.D. 165; the third commemorates the repair of a storehouse by the Asturian cohort in A.D. 225.

The site is now a grass field, and, as it has been little disturbed except in its north-eastern quarter, the Northumberland Excavation Committee of the Society of Antiquaries of Newcastle decided to excavate it. Owner and tenant gave every facility. Work began on July 23, 1894, at the south-west corner, and was continued into October. The most important result was the discovery in September of brooches and other ornaments, of which a full account is given by Mr. Evans. The following paragraphs are intended to describe very briefly the rest of the work of 1894.

1. *The south-west corner of the fortress.*—(i.) The corner turret, where the work began, is well built and well preserved; the inner walls are still standing over 6 feet high. In general it resembles the corner turrets of other mural fortresses. It has two flagged floors, one just a foot above the other: burnt refuse and marks of fire at the angles suggest that it has been used for cooking, and the objects found in it, a stone pestle and mortar, a quern, bits of iron and pottery, agree with the suggestion. (ii.) Fifteen feet east of it is a room of similar size, built like it against the wall of the fortress, but of the rudest masonry: the walls showed no outer faces, and may have been banked with earth. It yielded three coins (Trajan, Faustina), four bronze rings about 2 inches in diameter, and some iron fragments found lying together close to its west wall. It was roughly flagged, but had only one floor. (iii.) In the same quarter of the fortress the excavators found a large block of buildings, of which the south-west corner was 35 feet from the inside of the southern, 60 feet from the western fortress-wall. The masonry is rough. The block was not traced out; however, the area laid bare, 40 by 130 feet, seems to show a row of oblong chambers, each divided into two rooms, separated by narrow spaces: each chamber had its own outer walls and roof, like some buildings at Chesters and High Rochester. The floors were, as usual, double, and roughly flagged. The finds included two lettered fragments (IAE and XLVIII, not belonging together), two damaged bronze *paterae*, pottery, etc. Scattered through the rooms were half a dozen carefully-grooved, slightly-

wedged stones, which Mr. Holmes has identified as arch-stones. Similar blocks have been found at Chesters.[a]

2. *The Vault.*—A subterranean arched chamber has often been noted in the centre of the fortress. This was opened, or rather reopened, in August. It is a chamber about $6\frac{1}{2}$ feet square, roofed with five courses of stone, the pavement being about 5 feet below the crown of the arch and 4 feet below the present average surface level. This pavement consists of 3-inch flags resting on dwarf walls which themselves rest on undisturbed soil. A modern horseshoe drain has been carried through them, and Mr. Holmes doubts if the flooring is original. On the west side of the vault some large stones form an accidental or intentional ledge 8 inches high and 28 inches wide; on the north side the bed rock (whin) juts out to the same height. The exit was eastwards, but no steps were found. In general, this vault closely resembles a slightly larger vault which stands under a room on the south side of the *praetorium* at Chesters.[b] Vaults have been noted also at High Rochester, at Carnuntum, and in some of the Limes forts, in each case under a chamber of the *praetorium*. A variety of facts suggests (as Zangemeister and Hettner have observed) that these vaults were strong rooms under the *sacella* of the forts,[c] and we may well suppose the vaults at Æsica and Chesters to have served the same end.

3. Finally the south gate was discovered to have stood where the modern road passes through the wall to reach the farmhouse. It is strangely far from the centre of the south side of the fortress; a similar feature may be noticed at Housesteads. The walls of the western guard-chamber were found fairly well preserved, but neither door nor floor was recognisable. I noticed, however, clear indications that this gateway, like so many of the mural gateways, was at some time or another at least partially walled up.[d] Inside the guard-chamber the workmen found the remarkable fibulæ, rings, etc. which Mr. Evans describes; It is necessary here only to observe that these relics can hardly have been deposited much later than the end of the second century. It is uncertain whether they were found lying on or above the original floor level, but it is tempting, and perhaps not very rash, to connect them with the walling up of the gateway, and thus to obtain an approximate date for the latter.

[a] Bruce, *Handbook*, p. 101.

[b] Bruce, *Wall*, 155.

[c] See *der Obergermanisch-raetische Limes*, No. 44, Kastell Murrhardt, pp. 9-10.

[d] The western gateway, excavated in 1895, was found to have been wholly walled up; the masonry indicated that one-half had been closed first and the other at a later period.

Outside the guard-chamber, and a few feet west of it, close to the inner face of the fortress-wall, the workmen found a largish quantity of bronze scale-armour. Smaller quantities of such armour have been discovered also at Wall-town Crag, not far west of Æsica, at Hod Hill in Dorset, and Ham Hill in Somerset;[a] and at several places on the continent, Naples, Avenches, Mayence. The sepulchral reliefs of two Sertorii found at Verona, and probably dating from A.D. 69, show that such scale-armour was worn by the legionaries, and Dio (lxxviii 37) tells us that the emperor Macrinus abolished its use by the praetorians in A.D. 217.[b] The scales appear to have been attached by wire, and fastened on to a leathern cuirass: there is some slight reason to think that the result was something more in the nature of show-armour than the ordinary forms of breastplate.

Twenty-eight coins were found, of which Mr. C. J. Spence has kindly sent a list.[c] The only coin of interest is a legionary *denarius* of Mark Antony, having on the one side ANT AVG IIIVIR RPC and a galley, on the other LEG X and an eagle between two standards; it was found three feet below the present surface just outside the corner turret. Antony's legionary issues were in circulation even in the first portion of the third century, and have been found at several places on or near the Wall, at South Shields, Maryport, and elsewhere. The other coins recorded from Æsica belong to Domitian, Trajan (3), Hadrian, Pius (2), Marcus, the younger Faustina, Severus, Elagabalus, Victorinus, Tetricus, Allectus, Crispus, Constans (2), and Magnentius: nine are undecipherable.

The results of the work, apart from the one remarkable find of fibulæ, rings, etc., may appear scanty, but this was to be expected. Æsica seems, indeed, closely to resemble the other mural fortresses; it shows the same paucity of lesser finds, indications of the same ground plan, and the same abundance of buildings which characterises the excavated fortresses and forts in northern England, except Hardknott castle,[d] and distinguishes them from the forts along the German *limes*.

[a] Rome Hall, *Archaeologia Æliana*, xvi. 443.

[b] *See* Albert Müller, *Philologus*, xl. (1881) 248 foll.; Lindenschmit, *Tracht und Bewaffnung des römischen Heeres*, pl. xii. Presumably it was also used by auxiliaries, as on the Wall.

[c] It will be found in full, *Archaeologia Æliana*, xvii. pp. xxx.-xxxi.

[d] Excavated in 1892-3 by the Cumberland and Westmorland Architectural and Archaeological Society; see their *Transactions*, xiii. 375 *et seqq.*

IX.—*On a Bronze Statuette of Hercules.* *By* A. S. Murray, *Esq*, *LL.D.*, *F.S.A.*

Read March 14th, 1895.

The bronze statuette of Hercules which Lord Carlisle exhibits to-night at the desire of the President is said to have been "dug out of the Roman wall." But the precise spot appears to be now unknown. One statement gives Northumberland; another, his lordship's property of Naworth, in Cumberland, which is no great distance from the Roman station of *Amboglanna* (Birdoswald). One could suppose that the bronze had been brought to this country by some officer attached to that camp. That would mean in the time of Hadrian, by whom this station on the Roman wall was established. And were the figure of pure classical workmanship there would not be much more to be said on that point. But you will see that the bronze cannot be of classical origin, and this suggests an alternative that it may have been brought to this country by a devotee of the Tyrian Hercules established at Corbridge, in Northumberland, where an altar to him has been found.

Among the non-classical elements in the bronze may be noticed the action of the left arm with the clenched fist turned out to the front. It is a forcible but rude effort to express in the left hand an energy corresponding to that of the right hand, which has held the club raised to strike. In an archaic bronze statuette of Hercules in the British Museum, with the right hand similarly raised, the left finds nothing better to do than to hold the tail of the lion's skin, and it is not impossible that this may also have been the action of the Carlisle bronze. Again, the girdle worn round the waist with its three clasps fastened in front resembles nothing so much as certain archaic bronze girdles which we possess in the Museum, while the short skirt falling on the hips finds its best parallel in Greek sculpture of the sixth century B.C., and on the contemporary vases. To that period also belong the short body, massive legs, and the habit of

standing with both feet flat on the ground. The manner of wearing the lion's skin is no less characteristic of archaic Greek art, though not exclusively so, than are the other features just mentioned. It is a manner of wearing the lion's skin which is conspicuous also on those coins of Macedonia which we see rudely copied by the Gaulish mints.

And this brings me to the observation that the face of Hercules is very pronouncedly of the Macedonian type, and grandly rendered in its way. There is no element of archaism there. On the contrary, the face is in all essential points exactly the face of Hercules which was introduced into Greek art shortly before the time of Alexander the Great. It may be roughly executed, but there is no mistaking the source of this face. If these observations are correct we are landed in this difficulty, that the sculptor of this bronze has availed himself of two different periods of Greek art, taking the head from the Macedonian period, and the body from nearly two centuries earlier. No classical artist would have done that, not at least to the extent of retaining the two different elements so clearly and distinctly apart.

The question arises as to where such work could have been executed. I am inclined to think somewhere in Gaul. We hear from Pliny[a] of a Greek sculptor Zenodorus, who worked for ten years on a colossal bronze statue of Mercury in a town in Gaul, and we can imagine that during this period he may well have attracted round him a certain number of natives with artistic gifts. Subsequently he was summoned to Rome by Nero and there worked for him. We know Nero's taste for statues of gilded bronze, and we are told in the passage I am referring to that Nero was prepared to allow Zenodorus any amount of gold and silver for the statue he was making for him in Rome. That seems to fit in with the gilding on Lord Carlisle's bronze. So does also the statement which Pliny here adds, viz. that the statue of Nero by Zenodorus showed that the art of casting in bronze had disappeared, though Zenodorus was second to none of the ancients in his skill of modelling or of chasing. The Carlisle bronze is cast solid and is therefore an instance of the loss of the art of true casting. Pliny goes on to remark that Zenodorus, while at work in Gaul, had made copies of extraordinary exactness from two cups which had been chased by Calamis, a Greek artist of the end of the archaic period. The cups had been handed down to the Governor of the Gaulish province. Thus, a native Gaulish artist would apparently have had no difficulty at that time in finding Greek originals of various periods from

[a] *Nat. Hist.* xxxiv. 45

BRONZE STATUETTE OF HERCULES FOUND IN CUMBERLAND.

which to combine what features most attracted him for a figure of Hercules. We see this also in a bronze bust copied from the Doryphorus of Polycletus which has been found in Gaul.[a] The famous gold treasure of Vettersfelde, in Brandenburg (now in Berlin), and several other finds attest the presence of archaic Greek sculpture in Gaul and Germany, whether as contemporary imports from Greece or as the imports of Roman connoisseurs in later times. We know how much the Romans valued the archaic sculpture of Greece, and how readily they acquired Greek works in metal, carrying them about with them in their military expeditions, as did Nonius Vindex a statuette of Hercules by Lysippus, which had once belonged to Alexander the Great. These remarks, if accepted literally as bearing upon the Carlisle bronze, would lead us to place its origin about the time of Nero, and that would involve the difficulty of accounting for its finding its way to this country at that date. But if this difficulty is insuperable, we could imagine that the Greek influence of Zenodorus in Gaul may have lasted on to the time of Hadrian, and I would accept this view the more readily from remembering how strong the tendency was in the age of Hadrian to imitate archaic Greek sculpture.

In quoting the instance of a Roman general, Nonius Vindex, carrying about with him a famous bronze statuette, I did not wish to imply that the Carlisle bronze had been similarly brought to this country by a Roman general. A work of so distinctly provincial a character would hardly have attracted a Roman, however great an admirer he may have been of Hercules. But admiration of Hercules was not in those days confined to Roman generals in this country. I have already mentioned an altar found at Corbridge and now in the British Museum which bears a dedication in Greek to the Tyrian Hercules by a priestess, Diodora. So that even a priestess may have brought the bronze to this country, whether a Greek or a Gaulish priestess.

I am not directly suggesting that this Greek-speaking Diodora had actually brought over this bronze as an image of the Tyrian Hercules whom she served. There would be this objection so far as it goes that the Tyrian Hercules as we see him not unfrequently on Gaulish coins, is of a somewhat different type. He there holds his club downwards to the ground, is nude, and has no sign of archaism. As you are aware, these Gaulish coins were copied from the later coinage of Thasos, in which island the worship of the Tyrian Hercules had, according to tradition, been established by the Phœnicians at a very early period. At the same time the type of the Tyrian Hercules was not absolute and unchanging. We know as much

[a] Reinach, *Antiquités Nationales* (Musée St. Germain), 222.

from the archaic coins of Thasos itself, and from certain literary records. There was a statue of him holding a club in one hand and a bow in the other sent to Olympia by the people of Thasos (Pausanias, v. 25, 7), and there was at Erythrae an image of him floating on a raft. Between these extremes a good many varieties of type are possible, one of which may have been seen by our Gaulish sculptor.

Were it known for certain that the bronze had been found in Northumberland, say at Corbridge itself, it would not necessarily follow that we have here the type of the Tyrian Hercules, as there worshipped. Yet believing as I do that the Carlisle bronze is of Gaulish workmanship, and finding as we do among existing Gaulish figures of Hercules a not inconsiderable variety, not to mention the curious and as yet unattested type of that deity described by Philostratus, I do not see any serious objection to regarding this bronze as a Tyrian Hercules made by a Gaulish artist and brought to this country by an adherent of that particular form of worship.

But be these observations ever so wrong, there is no doubt that we have here a most interesting example of provincial sculpture, executed in Roman times, and combining artistic features derived from two widely different periods of Greek art.

*** This interesting figure has since been acquired by Sir A. Wollaston Franks, K.C.B., President, and by him presented to the Anglo-Roman collection at the British Museum.

X.—*Further Excavations in a Cemetery of South Saxons on High Down, Sussex.*

By Charles Hercules Read, *Esq.*, *Secretary.*

Read 20th June, 1895.

The first exploration of this cemetery in the autumn of 1893, of which I had the honour of laying an account before the Society,[a] was of so interesting a character that it was felt both by Mr. Edwin Henty and myself that it would be desirable to ascertain whether other graves did not exist within the limits of the ancient British camp. With this view the examination of the adjoining ground was made in the autumn of last year, and the results not only fully justified the examination, but resulted in discoveries of far greater interest than those previously made, and in one instance, at least, of a character hitherto unknown in England.

It may be well to refer again to the position of High Down Hill, though it is probably well known to most Fellows of the Society. It stands about two miles from the sea, behind the village of Ferring, a few hundred yards west of the well-known Miller's Tomb, and about five miles to the west of Worthing, the land between the down and the sea being a dead level of fertile soil. Almost every place-name in the neighbourhood is of Saxon origin, and it is somewhat to be wondered at that more discoveries of remains of this period have not been made in a country so full of Saxon associations. The cemetery lies within the ramparts of the ancient British camp, about the middle of the southern side, and extends northwards, covering rather more than half the width of the camp. The Society will be interested to know that General Pitt-Rivers proposes, with Mr. Henty's concurrence, to make a careful exploration of the camp itself, an undertaking that will doubtless produce results of an interesting character.

In my former paper I gave a detailed account of the contents of each of the

[a] *Archaeologia*, liv. 369-382.

thirty-two graves then opened. I do not propose to do this on the present occasion, for the second set of graves presented no new features in the method of burial, and though the associated remains differed in detail they occupied the same general positions in the graves as those of the previous year. I have therefore appended the list of the graves at the end of the paper. There appears to be no reason for believing that any difference in tribe or in period existed between the set of graves first explored and that now under consideration. In both cases the graves were, in almost every case, dug east and west, the head being always towards the west; the depth of the graves varied from about 3 feet to 4 feet 6 inches; the skeletons were, in most instances, extended on the back; and the filling in of the graves presented the same characters, the most marked of which was a layer of grey matter just above the skeleton. On the last occasion I expressed my regret that I had been unable to get an anatomist to examine the skeletons and preserve good characteristic specimens, so that the physical characters of the race buried here might be recorded. Although I made vigorous representations to sundry anatomical friends I could get nobody on the ground at the right time, as our Fellow Professor Macalister, who had promised to help, was prevented at the last moment from coming down. But for the accidental presence of Mr. Victor Horsley, I should have been quite without advice, and the chance visit that he paid resulted in the preservation of several skulls, now at Cambridge, and of a complete skeleton that he tells me is of some interest.

Although many objects of interest in bronze and iron have been found in this cemetery, there can be no question that the most important series is that of glass vessels. In the county of Sussex the association of so many vessels of glass with Saxon interments has been hitherto unknown, and I know of no cemetery of so small an area elsewhere that has been so prolific in vessels in this fragile material, unless, perhaps, the King's Field at Faversham. But from the mystery surrounding all the discoveries in this last locality it is impossible to say with any certainty what was really found there. As a general rule, it may be said that glass vessels are comparatively rare in Saxon interments, and the difficulty of comparing the examples scattered in small museums and private collections no doubt accounts for the fact that there is no exhaustive account of this important branch of art. Mr. Roach Smith, in his useful edition of the *Inventorium Sepulchrale*, gives but two pages to the account of the numerous glass vessels in the Faussett Collection, and beyond referring to the similarity of the vessels found in England to those from France and the Rhine, as to which there can be no doubt, he makes no attempt at the history of the art. Mr. Nesbitt, in his

Introduction to the Slade Catalogue, in like manner dismisses the subject in a few paragraphs, and there is no further information in his *Catalogue of Glass Vessels in the South Kensington Museum* (8vo, 1878). M. Garnier, in his recent work, *Histoire de la Verrerie*, is equally reticent. This shows clearly that the history of glassmaking during the dark ages has yet to be written, and that it has not been written is due, I think, rather to the difficulty of the task than to the paucity of the material.

Of the glass vessels upon the table all are worthy of examination, and three of them present features of special interest. The small bowl of clear white glass is remarkable for the oval depressions on the sides, a peculiarity of make that recalls the Roman drinking cups of pottery from the New Forest, an example of which, curiously enough, has been found in this cemetery, and one is tempted to think that it may have suggested the form to the glass-blower. Though good in colour, the glass is of poor quality and full of inequalities. The same may be said of the plain green conical glass drinking-horn; it is far inferior in make to the larger one of the same form shown last year. The other conical cup is better as a specimen of glass, and has in addition festoons of white glass round the body. An exactly similar vessel from Kent is in the museum of the Kent Archæological Society, and there can be little doubt that both issued from the same workshop. This method of ornamentation has been singularly persistent throughout the entire history of glass-making. It is common now; it was equally common in the last century, both in this country and abroad; in Venice it is an old pattern. Almost all the charming glass bottles from Camirus in Rhodes, and from other islands of the Mediterranean, are decorated in this way, while in Egypt the most ancient examples of ornamented glass are found with this design. One main reason for the universal adoption of the pattern is, no doubt, the simplicity of its production, but there is great probability that the design has been handed down from ancient times. This horn was the only object found with the body of its former owner, and it lay, as usual, at the head of the grave (Grave XXXIII.). The glass bowl with a foot is unusual in shape. It was found, unfortunately, in many fragments, in Grave LIII., with a number of small bronze objects, and an iron strike-a-light. In make it much resembles the tall goblet found in the 1893 excavations, the bowl and foot being made in a single piece.

The most noteworthy, not only of the glass vessels, but of all the remains found in the cemetery, is the greenish glass phial engraved with a frieze of hare and hounds, and an inscription in Greek letters round the lip (Pl. VIII.). This was found in Grave XLIX. on the second day of the diggings, and was the only

object found in the grave. It will be seen that the quality of the glass is very different from that of the other examples, this piece, though not of the first quality, bearing a strong resemblance to some of the Roman glass found in Britain. In shape, however, it is no more like Roman than Saxon, and I have been unable to find any figure of a vase, either in glass or pottery, at all resembling it. The design is cut on the wheel, not deeply, but the surface is engraved just enough to show the design. This design consists of a band round the body of the vase, upon which are represented a hound pursuing two hares, the intervening spaces filled with formal fern-like branches. Such representations, and in the same style as that before us, chiefly upon pottery, are by no means rare in late-Roman times, about the third or fourth century of our era, though they have been hardly, if ever, found under like circumstances. The inscription is engraved in the same way as the frieze, and consists of the words

+ ΟΥΓΙΕΝΩΝ ΧΡΩ.

extending round the circumference. Various suggestions have been made as to the precise meaning of these two words. It was thought that the *ὑγίεινων* might be the name of the medicine vendor who supplied the bottle and its contents, and a second suggestion was that the final *χρῶ* indicated a Christian origin. But the true explanation is quite of a different character, and was, I think, first suggested by our Fellow Mr. Haverfield. It is that the inscription before us is simply a Greek form of the common Latin inscription *Utere felix* or *feliciter*, so frequently found upon objects for use, such objects having originally no doubt been intended as gifts, to carry with them a good wish. Sir John Evans was kind enough to call my attention to a paper by the Rev. S. S. Lewis,[a] describing a vase inscribed *Utere felix*, found in Cambridgeshire. In this memoir reference is made to an able paper by Monsieur E. Miller, in the *Revue Archéologique*,[b] upon a small gold hairpin (or earpick) with the following inscription :

"Ὑγι[αί]νουσα χρῶ, κύρα. Καλῶν κ[αι]ρῶν ἀπολαύσῃς."
"Salva utere, domina. Felicibus temporibus fruaris."

M. Miller's remarks upon this inscription apply so well to the specimen before us that I cannot do better than quote what he says : "Let us first examine the two first words of our inscription, Ὑγιαίνουσα χρῶ. They answer to the Latin formula *utere felix* or *utere feliciter*, which is met with on a great number of

[a] *Cambridge Antiquarian Communications*, iv. 337.
[b] Vol. xxxviii. (1879), 39-45.

GLASS VESSEL FROM A SAXON GRAVE ON HIGH DOWN, SUSSEX.

jewels. . . . The words ὑγιαίνουσα and χρῶ, like the Latin ones *feliciter* and *felix utere*, are not necessarily connected in meaning; they are independent of one another. One can understand that the use of the object in question is not subordinated to the state of health of the owner. The word ὑγιαίνουσα simply expresses a wish, like *feliciter* or *felix* in the Latin form." M. Miller then cites Lucian's treatise "on a fault committed in saluting," where the precise value of ὑγίαινε as a salutation is shown. He then says, "With regard to the expression χρῶ, which answers to the Latin *utere*, it is found on precious stones and other objects. M. Le Blant[a] cites a plaque of grey glass, covered with a layer of green enamel. This little piece bears the words EIPHNH XPΩ in two lines. The same inscription is found on two other objects represented by Ficoroni,[b] who rightly considers EIPHNH as a proper name rather than as the dative εἰρήνῃ, and he has translated it as *Irene, utere*. Let us add that certain critics have seen in the word XPΩ an abbreviation of Χριστῷ, and have thus explained it." The gold pin is considered by M. Miller to belong to the tenth century, so that its relation in date to our glass is not very close, but I think it finally disposes of the meaning of the inscription, which may be expanded into "Make use of me, and may you keep in good health."

There is still one question about this phial to be decided, and that is the nature of its contents, and though I am not able to give a certain answer, yet with the help of my friend Professor Church I can give one that has all the elements of probability. When found, the bottle contained a number of fragments of a dry gelatinous film, mingled with tiny pieces of chalk. A portion of the contents was submitted to Professor Church for determination, and his reply is as follows:

"I have examined the ΥΓΙΕΙΝΩΝ ΧΡΩ, both under the microscope and chemically.

Putting on one side the little bits of chalk present, I find that the buff translucent pitted elastic pellicles consist mainly of a nitrogenous organic substance akin to gelatine. It might once have been skin—anyhow, it is certainly of animal origin. This most abundant constituent is accompanied by an aromatic substance. This is probably a fragrant vegetable balsam, but it occurs in very small proportion. There is also a little oxide of iron in these films. Lime in the form of carbonate is also present, but this may be due to the infiltration of calcareous

[a] *Bulletin arch. de l'Athenæum franç.* Feb. 1856, No. 2.

[b] *Gemm. Ant. Litt.* p. 41, pl. VI. 5.

water, and cannot be regarded as a certain original part of the material under discussion.

Is it possible that the preparation was a cosmetic? If so, it might have been made by mixing a red pigment of organic origin with chalk and size, and scenting it with a little powdered frankincense: the red pigment being perishable has disappeared."

This seems to me a very plausible hypothesis. So small a vessel can scarcely have been intended for a drink, seeing that the drinking-cups would each hold as much or more, while on the other hand nothing is more common than to find in these graves the implements of the toilet, and to these a bottle of fragrant cosmetic would form a fitting adjunct.

It is not easy to decide, upon the slender evidence of the object itself, the exact spot of its manufacture. There can be little doubt, however, that it was not made in Britain. The early Saxon settlers in Britain were not a literary race, and we may safely assume that the owner of this bottle did not think the more of it because the legend was written in Greek, but rather that its form or its contents were unlike the possessions of his neighbours. For the same reason it is not likely that it was the production of any of the Teutonic tribes who remained upon the Continent. The Greek inscription points to the south, and having got so far, it seems most probable that an object of this kind would come from Byzantium itself. The trade routes from the south to the north of Europe did not depend upon the Roman domination in Britain, and although the nature of the wares doubtless changed with the changing population, there is every reason for thinking that the trade with the Continent continued practically without interruption after the departure of the Romans from Britain.

The question of the place of manufacture of the typical Saxon glass vessels is not so easily disposed of. An examination of even a small series will show a great variety in quality, both in the glass itself and in the technical processes of the manufacture. Many of the small cups of simple outline would require the smallest amount of skill to make, and, given the knowledge of glass-blowing, they might have been made anywhere, and it is very possible that some were made in England. With the more complicated and elaborate vessels, such, for instance, as the drinking cups with hollow lobes at the sides, the conical cup from Kempston, and the cup of similar form from High Down, shown last year, it is far otherwise. To produce objects of such perfect execution, with such a complication of details, must have required trained workmen and a settled factory. The evidence of the graves tends to prove that this factory was not in England. The same forms are found in Normandy, in Belgium, and in Germany, as are found in England, but

the contents of the museum at Namur alone would almost suffice to prove that somewhere in its neighbourhood was, at any rate, one of the head-quarters of the glass work of the Saxons. These remarkable remains of Merovingian and Frankish times are all from the country in the vicinity, and I think a careful comparison of the finds on the Continent would show that somewhere between the Meuse and the Rhine was the seat of the glass workers who produced the choicer examples of our Saxon graves.

The vases of pottery found are of small size when compared with those of East Anglia, but while cremation was the rule in that district there was no sign of it on High Down. The pottery vessels were, therefore, doubtless used as receptacles for food. With the single exception of the Roman cup before mentioned, they seem all to be made by hand alone, without the use of the potter's wheel. Some of them are not inelegant in form, and are, for such vessels, elaborately decorated. This particularly applies to the two vases from Graves LXXIX. and LXXX. The types are, as before, quite unlike those of Kent, nor do they, except in details of ornament, resemble the pottery from East Anglia. It may be of interest to mention that one of the smaller vases, that from Grave XLVIII., in which was the body of a child of about six years of age, had a piece of stone as a cover. The little Roman cup of New Forest ware is an interesting discovery, for it helps us in some degree with regard to the date of the cemetery. It was the only object in the grave, and the skeleton was much decayed.

Mr. Akerman in his account of the Roman potworks in the New Forest[a], considers that the factory continued up to the end of the fourth century at least; and while agreeing with him in this, I can see no reason why it should not have continued to produce pottery even for a century longer, and thus within measurable distance of the time when these South Saxons were living and dying on the Sussex downs.

Fig. 1. Barbaric bronze head foundin an Anglo-Saxon cemetery on High Down, Sussex. ½.

In connection with this point I should like to call attention to a small bronze bust or head (fig. 1) found in Grave XLVII. with a third-brass coin of Constantius II. This small work of art has traces of classical style, but it is clearly barbaric in execution, and, I think, may fairly be set down to about the fifth century. It represents the head

[a] *Archaeologia*, xxxv. 91-99.

of a young faun, and all the characters and attributes are those found in Roman work of a good period; the pointed ears, the hair in heavy locks over the forehead, and the indications of a sprouting beard, and even the broad half-laughing face are just what may be found in the Bronze Room of the British Museum.

Grave LXXIV. contained another remarkable object, a penannular brooch of bronze about 3 inches in diameter, with a stout pin passing considerably beyond the circle (Pl. IX. fig. 5). This is very Celtic in type and is noteworthy in this respect, for though Celtic patterns are occasionally found with Saxon interments, it is usually at a later period and in connection with Christian burials. With this brooch were found a pair of smaller bronze brooches of the usual style, but of a type new to this cemetery, and one of the little bronze sheaths or tubes, the use of which we have not been able to determine.

This, I fear, concludes the exploration of the High Down cemetery. Mr. Henty has made sundry tentative explorations since the diggings came to an end last autumn, and we have come to the conclusion that very little more will be found. The results have, however, been I think highly satisfactory, for apart from the first graves, of which we have no record, eighty-six have been carefully explored and of these only a small proportion have been destitute of remains. Mr. Henty is to be congratulated upon so prolific a piece of property, and we owe him our thanks for giving us the opportunity of studying what he has been so fortunate as to find.

LIST OF THE GRAVES EXPLORED ON HIGH DOWN HILL, NEAR WORTHING, IN THE AUTUMN OF 1894.

The numbers are in continuation of those in the previous communication (*Archaeologia*, LIV. 369-382).

Grave XXXIII. At head, glass drinking horn with festoons in white. (Pl. IX. fig. 1.)

Grave XXXIV. Right of head, iron spear-head $8\frac{1}{2}$ inches long. Square bronze buckle, with iron pin, $1\frac{1}{2}$ inch wide, and heart-shaped bronze plate with carbuncle paste. (Pl. IX. fig. 2.) At hips an iron knife and strike-a-light.

Grave XXXV. Skeleton only, well preserved.

Grave XXXVI. On breast, circular bronze brooch, with embossed plate, much decayed. String of beads from breast to hips, amber and glass, some of the latter of very small size. At hips, circular ring brooch. The finger bones stained green by a double bronze ring which was apparently clasped in the hand. In the ring was a mass of iron rust. Bronze tube, about 2 inches long. Iron knife.

Grave XXXVII. No relics.

Grave XXXVIII. No relics.

Grave XXXIX. Globular vase of pottery at right of head. Iron knife. Plain bronze buckle. Portion of iron tweezers. Flat oval iron ring. Two bronze studs, shield-shaped. Bronze tube, tapering, $2\frac{1}{2}$ inches long.

Grave XL. Circular bronze band near head. Iron spear-head at left shoulder, $13\frac{1}{2}$ inches long. Bronze tweezers at waist.

Grave XLI. Two bronze penannular brooches on breast, diameter $1\frac{1}{4}$ and $1\frac{1}{16}$ inches.

Grave XLII. Iron spear-head at right shoulder, $9\frac{1}{2}$ inches long. Iron knife at right side, $5\frac{3}{8}$ inches long. Decayed iron ring, 2 inches in diameter.

Grave XLIII. No relics.

Grave XLIV. No relics.

Grave XLV. Iron knife on right hip, $6\frac{1}{2}$ inches long. Iron buckle on left hip, width $1\frac{1}{8}$ inch.

Grave XLVI. Body of a strong man lying on right side. At hips a small bronze buckle, $\frac{3}{4}$ inch wide. Iron knife, $5\frac{7}{8}$ inches long.

Grave XLVII. Third brass coin of Constantius II. (A.D. 337-361). Bronze bust of a faun (fig. 1).

Grave XLVIII. Child about six years of age. Pottery vase with small stone slab as a cover.

Grave XLIX. At head, glass bottle containing the remains probably of a cosmetic, engraved with frieze of hare and hounds and inscribed round the lip ΥΓΙΕΝΩΝ ΧΡΩ. (Pl. VIII.)

Grave L. Under chin, flat annular brooch of bronze. On right hip, small bead of dull brown bone (?) and five irregular beads of amber, diameter $\frac{1}{2}$ inch to 1 inch.

Grave LI. No relics.

Grave LII. Here the trench cut through a grave containing two bodies of adults, heads due south-west. No relics.

Graves LIII. At head, glass bowl with foot, much broken. On right hip a strike-a-light. Square bronze mount. Bronze strap tag. Iron knife. Two fragments of bronze mounts (? from lip of a bucket). Bronze triangular stud with rivets. Penannular iron ring.

Grave LIV. Body at right angles to usual direction, with head due south-west. Near head, fragments of pottery vase, 3 to 4 inches high.

Grave LV. Body of aged person, 70 to 80. No relics.

Grave LVI. Body due north and south. No relics.

Grave LVII. Body of powerful man. Above head, bronze buckle with semi-circular plate. Strike-a-light. Iron knife. Iron buckle with two straight bars.

Grave LVIII. Apparently the grave of a child; no bones remaining, a milk tooth only. Large bone bead, diameter $1\frac{1}{4}$ inch. Hexagonal bead of sapphire blue glass facetted, diameter $1\frac{3}{16}$ inch. (Pl. IX. fig. 3.) Three circular bronze pendent discs, diameter $\frac{15}{16}$ inch. Oblong bronze plate, length 1 inch. Oval bead of jet (?), diameter $\frac{11}{16}$ inch. Melon bead of dark amber glass. Fragment of iron knife. Bronze wire brooch. Small pottery vase in fragments, impressed ornament round neck.

Grave LIX. Near head two small bronze cramps (?). At hips iron buckle, width $1\frac{5}{8}$ inch.

Grave LX. Square bronze brooch, a thin plate with circular opening, 2 inches wide. (Pl. IX. fig. 4.) Circular bronze brooch with ornament of circles, iron pin. Iron buckle much decayed. Iron knife. Iron nail (?). Circular bronze brooch, tinned, plain; at hips.

Grave LXI. Child about six or seven years of age. South-west and north-east. No relics.

Grave LXII. Young adult woman. Above head square bronze mount, ornamented. On breast pair of bronze brooches. Line of charcoal.

Grave LXIII. No relics.

Grave LXIV. No relics.

Grave LXV. No relics.

Grave LXVI. No relics. (Skeleton preserved by Prof. Victor Horsley.)

Grave LXVII. No relics.

Grave LXVIII. No relics.

Grave LXIX. Child. Pottery vase.

Grave LXX. No relics.

Grave LXXI. Two gilt bronze brooches. Iron knife at left side.

Grave LXXII. Circular bronze brooch much decayed. Iron pin. Amber bead.

Grave LXXIII. Child. Circular bronze brooch. Seven beads.

Grave LXXIV. Bronze sheath at left of neck. Iron knife. Iron buckle in middle of grave. Bronze penannular brooch, 3 inches diameter at pelvis (Pl. IX. fig. 5). Two bronze brooches on chest. Small bronze buckle. Bronze object like paper-fastener at left of head.

Grave LXXV. No relics.

Grave LXXVI. Iron buckle. Iron knife. Iron strike-a-light. Bronze pin.

Grave LXXVII. No relics.

Grave LXXVIII. Vase of pottery.

Grave LXXIX. Vase of pottery. A second vase with constricted neck, 3 inches high. Plain conical glass drinking-horn, $5\frac{1}{2}$ inches high.

Grave LXXX. At right of head, ornamented vase of pottery, with bulbous neck, 5 inches high. Near it, spear-head of iron, 8 inches long. Iron knife at left side.

Grave LXXXI. Skeleton with legs crossed. Iron buckle. Iron knife.

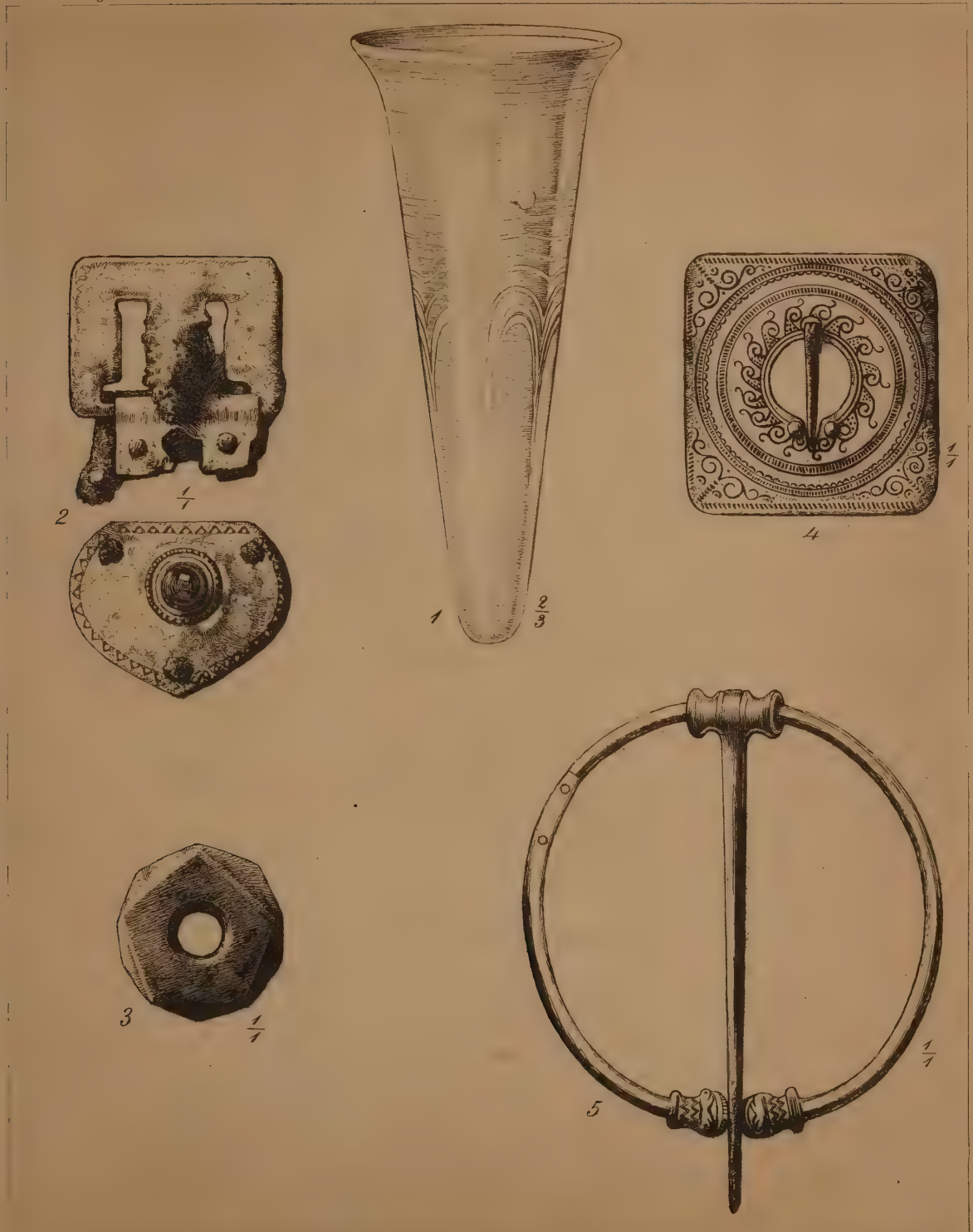
Grave LXXXII. Cup of New Forest ware (Roman).

Grave LXXXIII. No relics.

Grave LXXXIV. No relics—a prolongation of No. LXXXIII.

Grave LXXXV. String of 151 beads. Iron knife. Bronze sheath with portion of iron blade, at left side of head. Bronze wire bracelet on arm. Bronze ring with toilet implements. Two circular bronze brooches, much decayed. Fragment of bone comb with iron rivets, lying on a piece of leather, no doubt the remains of its case.

Grave LXXXVI. No relics.



SAXON ANTIQUITIES FROM HIGH DOWN, SUSSEX.

XI.—*Excavations on the site of the Roman city at Silchester, Hants, in* 1895. *By* W. H. St. John Hope, *Esq., M.A., and* George E. Fox, *Esq., Hon. M.A. Oxon., F.S.A.*

Read March 19 and March 26, 1896.

The report which we have the honour of submitting to the Society, on behalf of the Executive Committee of the Silchester Excavation Fund, of the discoveries made during the past year, is also the record of the systematic excavation of the site for the sixth successive season.

The excavations were resumed on May 7th, under the direction and supervision of our colleague Mr. Herbert Jones, F.S.A., to whom a deep debt of gratitude is due not only from the Committee of the Silchester Excavation Fund, but from antiquaries in general, for the patient watchfulness and constant attendance so freely given for nearly three months. The excavations carried on after harvest were supervised by Mr. Mill Stephenson, Mr. A. H. Lyell, and ourselves.

Following up our principle of working from the known to the unknown, the excavations of last year were extended to two *insulæ* immediately to the south of part of the preceding year's work, on the other side of the main street that traversed the city from east to west. These two *insulæ*, which we have numbered XIII. and XIV., extend from the city wall on the west, to *Insula* II., which was excavated in 1891, on the east. They together cover an area of $3\frac{1}{2}$ acres.

The portion of the city wall that bounds *Insula* XIII. contains at its northern end the remains of the west gate. This was fully described in our first report, of the excavations carried out in 1890.[a] About 180 feet south of the gate occurs one of the pilaster-like strips that are found at intervals of some 200 feet throughout the circuit of the city wall. The upper part of the wall, for its entire course, is set back 2 feet, so that the lower part forms as it were a deep plinth. From

[a] *Archaeologia*, lii. 754-757.

this plinth are carried up the broad strips in question. They have an average width of 12 or 12½ feet. They can hardly have served or been intended for buttresses, and are more likely the bases of a series of watch-towers or turrets set astride the wall at more or less regular intervals.

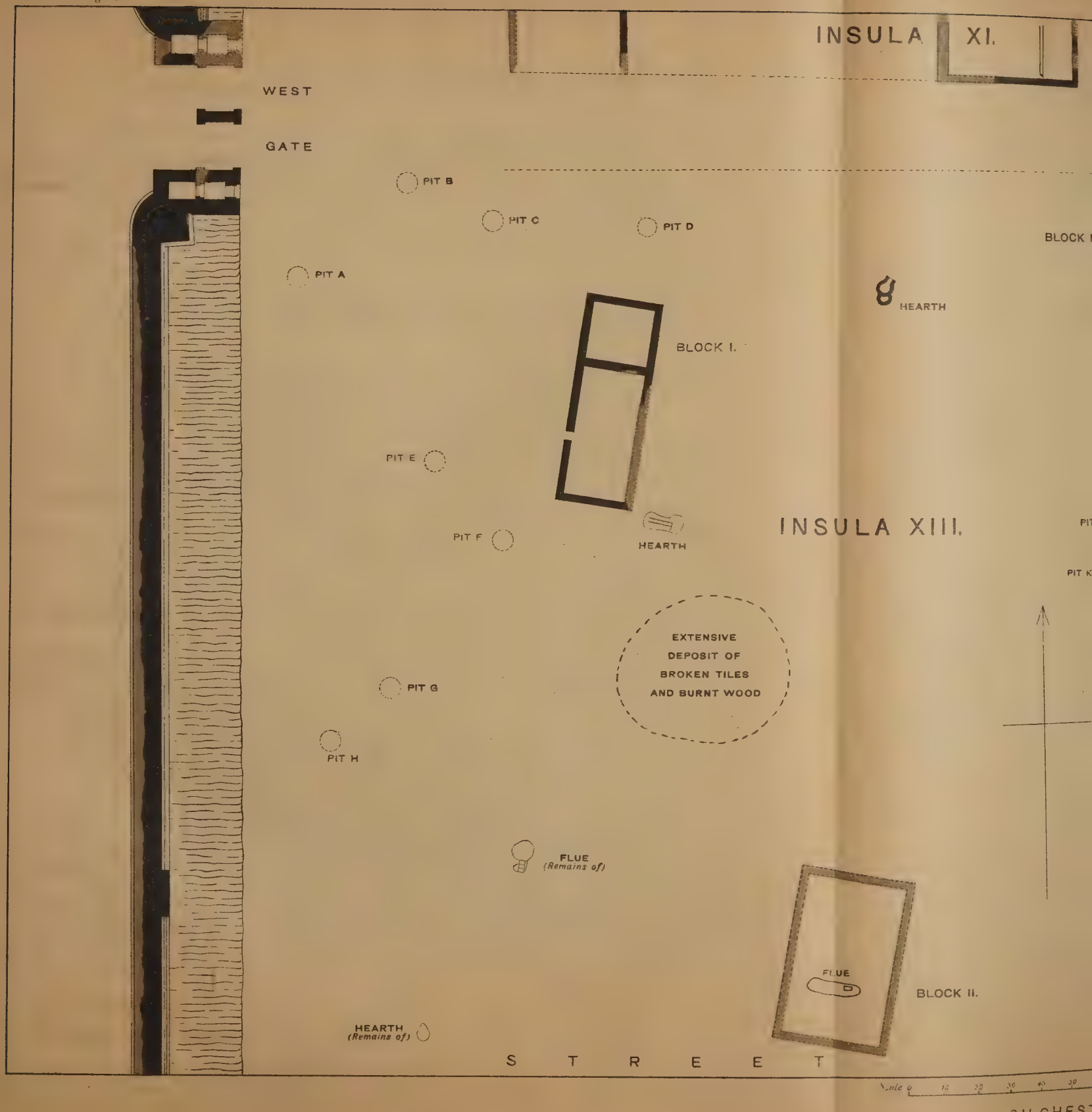
The outer facing of the wall, in the section under notice, has been everywhere removed, and the wall itself is much broken down.

No greater contrast has yet presented itself during one season's excavation than that between the two *insulæ* examined in 1895: *Insula* XIII. being almost destitute of remains of any kind; while *Insula* XIV. is practically covered with the foundations of buildings. (See Plan, Plate X.)

Insula XIII. measured from the city wall about 330 feet in length from west to east, and nearly 240 feet from north to south, but from its length must be deducted 18 or 20 feet for the mound or bank that lines the wall. Another and wider strip at the foot of the bank would also be kept free from buildings and, perhaps, form a road or street, so that the actual length of the *insula* was probably not much more than 270 feet. It was bounded on the north, east, and south sides by streets, but, except where buildings abut upon these, there are no traces of a wall or other positive limit, and it is possible that the boundary was, for the most part, merely a wooden fence or paling.

The buildings discovered within the *insula* are only five in number. One of them was a small house, but the others were similar in character to those found in the preceding year in *Insulæ* IX. X. and XI. and were obviously used for the same purpose. In other words, *Insula* XIII., like those on the north side of the main street, was given up to the dyeing industry which we believe was carried on in this part of the town. In two of the buildings were flues or furnaces of the kind previously noted as possibly used in dyeing, and remains of four others were scattered about the *insula*.

The first of the buildings (Block I.) was situated in the northern part of the western half of the *insula*, not far from the west gate of the city. It lay a little off the main street, with which it made a small angle, and was in plan a simple parallelogram, standing nearly north and south. It was divided by a cross wall into two chambers of unequal size, and had walls of flint rubble, of an average thickness of 26 inches, with tile quoins. The larger or southern chamber was 35 feet long by 17 feet wide, and had a doorway in its west wall near the middle of its length. The east wall has been almost entirely destroyed. The smaller or northern chamber measured 17 feet by 15 feet 3 inches. No remains of any kind were found in this block, except fragments of the large red tiles with which it was roofed.


INSULA XI.
WEST
GATE
PIT B
PIT C
PIT D
PIT A
HEARTH
BLOCK I.
PIT E
PIT F
HEARTH
INSULA XIII.
EXTENSIVE
DEPOSIT OF
BROKEN TILES
AND BURNT WOOD
PIT G
PIT H
FLUE
(Remains of)
FLUE
BLOCK II.
HEARTH
(Remains of)
S T R E E T

Almost touching the south-east angle of Block I. and parallel with its south wall were the remains of one of the long flues or hearths, of which we found so many in 1894. Its mouth was towards the east.

About 20 feet to the south of this flue an extensive deposit of burnt wood and broken roof tiles was met with. This clearly marks the site of a wooden structure that has been destroyed by fire, but nothing was found in or near the spot to indicate its extent or use.

At a distance of 100 feet due south of Block I. were the remains of a second flue. It lay north and south, but only three of the tiles that formed its bed were in place.

On the southern edge of the *insula*, 50 feet south-west of the last-mentioned flue, the traces were met with of one of the round or pear-shaped furnaces. It was unfortunately much ruined and its materials decomposed.

About the middle of this south side of the *insula*, and abutting upon the street there, with which it formed a slight angle, lay the foundations of Block II. It consisted of a single chamber, a large oblong one, 43 feet 9 inches long by 27½ feet wide, which stood north and south, and had in its southern half, clear of the side walls, one of the usual long flues, probably for warming the room as a drying place for cloth, yarn, or other dyed stuffs.

Due north of this block and 28 feet from the northern edge of the *insula* was a second example of the circular hearths or furnaces. This was in fairly perfect condition, but like those found the preceding year it had been reduced in height to only a few inches. Its opening faced north. Beneath it and partly overlapped by it lay the remains of an older one of the same size and shape.

Blocks III. and IV., like the similar buildings in *Insulæ* IX. X. and XI., abutted upon the main street. They lay at the north-east corner of the *insula*, side by side, but separated by an interval of 3 feet. Block III., which was the western of the two, was a simple parallelogram, 46 feet 4 inches long by 20 feet 6 inches wide, standing north and south. A patch of gravel near the middle of its area may indicate the site of a drying hearth, but no traces of this remained. Block IV. was also a parallelogram, 59 feet 6 inches in length, but its width could not be definitely ascertained. Near its probable centre were the remains of a circular or rather pear-shaped hearth, but with no visible mouth or outlet, and against the middle of the west wall was the base of one of the long flues. In this respect, of containing an example of each kind of furnace, this block resembles Block III. in *Insula* XI. It further contained a pit, which perhaps was used as a water-hole.

Immediately to the south of and at a distance of 23 feet from Block IV. were the foundations of the one house that stood within *Insula* XIII. It was of the corridor type, and extended for 116 feet along the street or lane that divided the two *insulæ* under notice.

Its plan shows a row of four good sized rooms (1—4) along the street front, with a corridor (5) and other rooms (6 and 7) behind, and at the south end a large enclosure (9) about 29 feet square, with a narrower addition (10) on its south side. The four front rooms were nearly of a size, with a uniform length of 17 feet 9 inches and an average width of 15 feet, but only their foundations could be traced. Behind the northernmost (1) was a large room (6) 23 feet long by 15 feet 9 inches wide. It was warmed by a hypocaust, which extended under all the floor, except a strip 4 feet 6 inches wide across the east end. The floor itself has been utterly destroyed, but the remains of the *pilæ*, which were built of tiles 8 inches square, shew that they were arranged in ten rows in one direction, and twelve in the other. The stoke-hole was on the north side. The positions of the wall flues indicate that this room had two doorways on the south side, and perhaps another, or a wide opening, in the east wall, but none on the north or west. Of the two doorways in the south wall, the eastern communicated with the corridor; the other opened from or into a smaller room (7), which also had a wide doorway or entrance 6 feet wide between it and the corridor. Another small chamber (5) adjoined the large room on the north, but as there was no doorway of communication between them, it probably served as the wood house for supplying the hypocaust. The corridor itself was nearly $7\frac{1}{2}$ feet wide and 50 feet long. At its north end a few drab stone *tesseræ* of the flooring were found in place. The large enclosure (9) at the opposite end of the corridor was probably a yard, but nothing of it remained save the gravel foundations of its walls. It measured $29\frac{1}{2}$ feet in length by $27\frac{1}{2}$ feet in width. Adjoining it on the south was a narrower enclosure, or perhaps a shed, $28\frac{1}{2}$ feet long and 12 feet 3 inches wide. Against the north wall of this, and near its west end, lay a block of ironstone $3\frac{1}{2}$ feet long and 2 feet 9 inches wide.

From the large quantity of broken pieces found in and about the house, it is evident that it was roofed with the usual thin hexagonal stone slabs or slates. Of the floors no traces remained, except the fragment at the north end of the corridor.[a]

[a] The actual dimensions of the rooms in this house are as follows: (1—4) each 17 feet 9 inches in length, by 14 feet 8 inches, 15 feet 9 inches, 14 feet 6 inches, and 16 feet 3 inches in width, respectively; (5) 13 feet by 11 feet; (6) 23 feet by 15 feet 9 inches; (7) 13 feet 3 inches by 12 feet

In plan this building closely resembles House No. 2, *Insula* II.,[a] and it was also nearly the same size. If our conjecture be right that the small chamber (5) was the wood house, and that the large southern enclosure (9) and its annexe (10) were merely yards, it will be seen that the main part of the building formed a compact little house. One or more of the rooms lining the street may have been used as shops, but as the street itself was only a minor one this is hardly likely.

That the house had an upper story there cannot be much doubt. The stair to this probably stood against the north wall of the chamber (7) south of the winter room (that warmed by the hypocaust), where there is space for it as well as for the door into the winter room itself. It was perhaps to accommodate such a stair that the wide opening from the corridor was placed more to one side than the other of the chamber.

Before leaving *Insula* XIII. it may be remarked that practically no objects of interest were found in it, and the singularly few rubbish pits met with were equally barren of results when cleared out. It is not improbable on this account that these pits had been used as water holes.

Insula XIV. measured 270 feet from west to east, and 236 feet from north to south, and was bounded on all its four sides by streets. On the north was the main street of the city, which was nearly 25 feet wide; the streets on the east and west were about 19 feet wide; that on the south has not yet been traced. The street boundaries are clearly marked in nearly every part by walls or buildings.

In complete contrast to the large amount of open ground in the first described *insula*, *Insula* XIV. was almost entirely covered with the foundations of two large and important houses. The possibility of their discovery had been foreshadowed in 1894, when the uncovering of the foundation of the boundary wall on the north side of the *insula* revealed the bases of the two gateways that opened into the courtyards of the houses.

A wall running from north to south divided the *insula* into two unequal parts. In the larger or western half, which took up three-fifths of the *insula*, were the foundations of House No. 1. They occupied the south-west corner of the *insula*, and extended northwards from the street on the south for 148 feet. The main width of the house was 126 feet, but two chambers projected further eastwards 11½ and 15 feet respectively.

1½ inch; (8) 49 feet 3 inches long by 7 feet 6 inches wide; (9) 29 feet 6 inches by 27 feet 6 inches; (10) 28 feet 6 inches by 12 feet 3 inches. The remaining walls were 2 feet thick.

[a] *Archaeologia*, liii. 276, pl. xxiii.

The space north of the house, between it and the main street, seems to have formed a large courtyard about 85 feet wide, and until it was encroached upon by buildings nearly 160 feet long. The boundary wall on the north was 2 feet in thickness, and had nearly in the middle of its length an important entrance gateway, 13 feet 6 inches wide. On either side of the opening, and extending inwards into the *insula*, was a strong and massive foundation 6 feet wide and 8 feet long. These must have supported an architectural composition of some kind, for such bases would hardly have been provided for mere gate-posts.

In the angle formed by the western foundation and the boundary wall was uncovered a slightly sunk area 15 feet long and 3 feet 3 inches wide, with side walls 2 feet thick, built of flints and courses of tiles. The bottom was a little below the level of the street. It had clearly been lined throughout with cement, most of which had been destroyed. From its position this was not improbably a tank or trough for watering horses. Just to the west of it, and occupying the north-west corner of the courtyard, were the foundations of a building, about 50 feet long and 32 feet wide, divided by a cross-wall into two unequal parts. The larger portion, which was square, was probably a stable. Outside on the east were the enclosing walls of a small yard. Two pits were found underlying the watering tank, and there were two others in the eastern part of the court, but none of them yielded anything of interest.

On the east side of the house was a strip of ground about 40 feet wide, between it and the party wall of House No. 2. It seems to have served for menial purposes only, for the stokehole of the southern of two chambers that here projected from the range, beneath each of which was a hypocaust, opened into it. The stokehole of the northern chamber was on its north side, but it seems also to have had a soot-door, or some such opening on the east.

The plan of the house (Plate XI.) belongs to what we have called the "courtyard type," that is, having a central court or area round which the various corridors and chambers are disposed, but it differs from that of any other house yet uncovered at Silchester in having the central area surrounded by chambers on all four sides, instead of having one side open or closed by a wall only.

The apparently once imposing gateway from the main street on the north would suggest that the principal entrance of the house was on that side. This part has, however, been rebuilt, and the foundations of the later work do not indicate any such entrance. On the contrary, the chief doorway was at the opposite end of the house, in the middle of the wing that there abutted upon the street. It was 6 feet in width, and opened directly into a spacious lobby or

Scale 0 10 20 30 40 50 Feet

CORRIDOR
19
20
CORRIDOR
STOKEHOLE
22
STOKE-HOLE
29
DOOR
23
DOOR
17c
17b
17
17a
16
CORRIDOR
COURT OR GARDEN
WELL
CORRIDOR
24
DOOR
DOOR
25
DOOR
DOOR
26
DOOR
27
DOOR
DOOR
CORRIDOR
STOKE-HOLE
30
28
15
CORRIDOR
7
14
13
11
12
6
8
PORTER'S LODGE
10
9
1
LOBBY
4
5
2
3
7
STREET

W. H. St. John Hope, mens. et del.

SILCHESTER.—PLAN OF HOUSE No. 1, INSULA XIV.

entrance hall (1), paved with red-tile *tesseræ*. Right and left of this were various chambers, etc. but the arrangement of them differed on each side.

On the right (or east) and fronting the street were two rooms (2 and 3), one beyond the other. The first (2) had a floor of ordinary red-tile *tesseræ*. In the second room (3) no trace of its flooring remained. These two chambers were perhaps used as shops. Behind them were three other apartments. The first (4), which adjoined the entrance-hall, had a pavement of red-tile *tesseræ*, but as it was surrounded by chambers on all sides it is not easy to see how it was lighted. If it were a store-room in connection with the supposed shop (2) south of it, it might have received from it so much light as was necessary. That such a connexion is more than probable is seen in the fact that although the rooms were not quite equal in length, they originally had one continuous pavement, for the party wall between them, which was only 17 inches thick, was actually built upon this pavement. To the east of chamber (4), was another (5), 5 feet 3 inches long from north to south, but only 3 feet wide. No trace of any floor remained. It may have been a dark cupboard or storeplace opening from the larger room or shop (3) in front of it, for like the chamber west of it it was completely surrounded by other rooms. The third chamber (6) behind the two front rooms extended backward towards the east wing of the house. Nothing was found to show how it was paved. As will be seen presently, it may have contained a staircase to an upper floor.

On the left, or west side of the entrance-hall, instead of the two rooms or shops on the other side, was a narrow corridor (7), 5 feet 4 inches wide and 43 feet long, running east and west along the street, and returning northward at a right angle at the farther end. On the north side of it were two, or perhaps three apartments. The first (8) opened out of the entrance-hall, and was, no doubt, the porter's lodge. Its flooring had been destroyed. The room next to it (9) had a doorway 4 feet 3 inches wide in its north-east corner from a large room in that direction. Nothing was found to show how it had been paved or what was its use; it must have derived its light from the corridor. The chamber west of it (10) was of the same width as No. 9, but its length is uncertain, as nothing remained of any wall dividing it from the return of the corridor. It had a pavement of red-tile *tesseræ*, and in its north wall was a doorway, 4 feet wide, from or into the next room.

Opening directly out of the north end of the entrance-hall was a passage (11), 17 feet long, and paved with the usual red-tile *tesseræ*, that led to the inner part of the house. It was flanked on either side by a large and important room. That on the east (12) originally had a fine mosaic pavement of elaborate design and con-

siderable proportions, within a border of coarse red-tile *tesseræ*. Unfortunately, almost the whole had been destroyed, and only a few fragments of the braided or plaited bands that divided the panels remained in place. The corresponding chamber (13), on the west of the passage, had doors in each of its sides: on the east, from the passage; on the south, into one of the rooms there; a west one, over 6 feet wide, into a large chamber in that direction; and one on the north, communicating with the inner corridor there. This last doorway was 5 feet 3 inches in width. The pavement of the room had entirely disappeared.

The passage from the entrance hall opened at its north end by its full width into the inner corridor of the house, which extended along the south, west, and north sides of the courtyard or garden that occupied the centre of the mansion. The first section of this corridor was 8 feet 3 inches in width and 48 feet in length, and paved throughout with the ordinary red-tile 1-inch *tesseræ*. Its eastern end was closed by a wall, through which a doorway led into another corridor of considerable length, running north and south, that traversed the east or fourth side of the courtyard. At its west end a second section of the corridor returned northwards for 65 feet, but with a reduced width of 7 feet 10 inches, as far as the gravel foundation of the wall that crossed the north end of the courtyard. This foundation was 3 feet in breadth, and had to the north of it a third section of the corridor, 48 feet long and between 9 and 10 feet wide. A slight prolongation of the north wall of the first section of the ambulatory at its western angle may indicate that it was closed there by a partition.

Behind the second section of the ambulatory, and overlapping it on the north and south, was the west wing of the house. The southern half of this contained four large chambers. The first of them (14) was paved with red-tile *tesseræ*. It communicated with chambers (13) on the east and (10) on the south, and probably with the corridor (7) on the west of it. The next chamber north (15) was also paved with the ordinary red *tesseræ;* it no doubt had a door from the ambulatory on the east. As they had doorways between them it is possible that chambers 9, 10, 13, and 14 formed one suite of apartments. The third chamber (16) was of considerable size, measuring $17\frac{1}{2}$ feet from east to west and 22 feet $4\frac{1}{2}$ inches from north to south. It was paved with red *opus signinum*, and no doubt was entered from the main corridor. The wall on this side was, however, reduced to the floor level, and there shewed the mortar bed of a band of tiles. The fourth chamber (17) was also a large one. It had a doorway from the ambulatory in its south-east corner, and was paved throughout with red-tile *tesseræ*. North of this apartment the rest of the wing has been so altered and afterwards so ruined that

it is impossible to make out anything definite as to its arrangements. The alteration actually began with chamber 17, which occupies the site of two older rooms (17a and 17b), and of part of a passage (17c) north of them. The passage was 6 feet in width and paved with red *tesseræ*, the level of which was 6 inches below that of chamber 17, and apparently of that of the two earlier rooms. To meet this difference of level, the floor of the corridor outside seems to have gradually sloped from south to north. The new north wall of the later apartment, which was 2 feet thick, traversed the central line of the passage, and so put an end to its original use as a way through the wing of the house.

On the north side of the later wall another large chamber (18), of the same size as (17), appears to have taken the place of the earlier arrangement there. It seems to have been warmed by a hypocaust, which apparently had a cruciform central flue laid with large red tiles, and narrower flues running round the side walls. The intervening blocks that carried the floor were largely composed of chalk, and plastered. The remainder of the wing contained traces of other flues, but all was too ruined to be made out satisfactorily.

The return of the little corridor on the south front of the mansion originally traversed the whole of the west side of the west wing; but, as in other houses at Silchester, it was divided into sections by thin partitions at intervals, and at a later date further subdivided and converted into rooms and offices. To what use these were put it would be hazardous to guess. One at the upper extremity contained the base of a flue about 14 feet long.

The corridor was returned eastwards along the north front of the house, and retained in one place traces of a floor of red tiles. Between it and the ambulatory traversing the north end of the inner courtyard was the north wing of the mansion. This appears to have contained two rooms only (19 and 20), but they were of considerable size, being each about 23 feet long and 18 feet wide. Unfortunately nothing remained of them but the gravel foundations of the walls. The corridor south of them was in the same condition.

The inner courtyard measured 55 feet from north to south, and 38½ feet from east to west. The trenches driven across it in various directions revealed two features of interest.

The first of these was a well about 21 feet deep, sunk in the southern part of the court. Traces of the wood lining[a] remained, but nothing important was discovered in it.

[a] Many of the pieces of wood found in the wells and pits at Silchester are found, after removal,

In the northern part of the court, at 6½ feet from its north wall, were revealed the foundations of a small building 6½ feet square, with flint rubble walls 13 inches thick. It stood with its sides parallel to those of the courtyard, but was not placed quite centrally, there being an interval of 15 feet 3 inches west of it, and of 17 feet on the east. Against the south wall was apparently a step 1 foot 10½ inches wide, made of flints. Possibly these are the remains of a small *lararium* or shrine for the household gods, the walls being carried up solid to support the slab or platform upon which stood the little covered shrine of the *lares*. To the consideration, however, of this question we shall revert in discussing a similar construction in the other house.

The most important part of the mansion, as will be seen from the plan (Plate XI.), was the eastern wing. It is of especial interest, not only from the size of the rooms, but on account of the large and handsome mosaic pavements that were found in four of them. It was about 128 feet long and 47½ feet wide, and consisted of a central row of chambers placed between two corridors, the western of which was returned across the south end. The western corridor has been described already as forming the eastern ambulatory of the central cloister or courtyard. It was a little over 100 feet in length and from 7¾ to 8 feet in width, and was paved throughout with red-tile *tesseræ*. Originally it was perhaps longer, and had in its northern end a door towards the main street, for about 17 feet seems to have been cut off to form a stokehole or furnace room (21) for a hypocaust beneath the northernmost chamber.

to bear in parts an incrustation or deposit of a bright blue colour. This has been identified by Professor Church, F.R.S., F.S.A., as the mineral vivianite, and he has obligingly communicated the following note on a specimen found in 1894:

"I have examined the blue substance from the remains of the iron-bound wooden bucket found at Silchester. It proves to be, as I suspected, the mineral vivianite, a hydrous ferrous phosphate, which if pure would contain the following percentages:

Phosphorus pentoxide	28·3
Iron protoxide	43·0
Water	28·7

Its formula is $Fe_3 P_2 O_8, 8 H_2O$. Under the microscope the earthy look of the compound is replaced by a distinctly crystalline appearance, indeed the substance is seen to be made up of felted crystals, oblique prisms. The occurrence of vivianite has been noted in peat bogs in Shetland and Isle of Man, accompanying sometimes the horns of the elk and deer. Dana says the mineral has been found 'near an old slaughter-house in Edinburgh.'"

An extensive deposit of vivianite seems to have occurred throughout a barrow known as Roylow, in Derbyshire, which was opened in 1894. See *Proceedings*, 2nd S. xv. 426.

Scale of

2 3 feet

George E. Fox, delt. 1895

This apartment (22) was the largest in the mansion, and measured 22½ feet in width by over 23 feet in length. It was paved with ordinary red-tile *tesseræ*, with a central panel 15 feet square of finer mosaic in white, black, red, and yellow. (Plate XII.)

The design was composed of geometrical figures formed by lines of black *tesseræ* on a white ground, the main divisions of which consisted of five large octagonal panels enclosing circles of braid-work of varying colours. Each circle contained a coloured rosette. Four of the octagonal panels were joined to the fifth, which occupied the centre of the pavement, and were further connected by small square panels, each containing a knot of braidwork with spiral attachments set within a square. Outside the large panels was a narrow enclosing border of panels of braidwork, which was interrupted at the angles and in the centre of each side by hollow quarter-octagons and half-octagons formed of black and white lozenges. The whole design was enclosed by a border of white, of black and white indented, and a broad plaited band.

This fine pavement[a] was unfortunately much damaged, the north-east half being completely destroyed. What remained of it was so perfect as to justify, in our opinion, its removal. It was then ascertained that beneath it lay a hypocaust, and it was through the partial destruction of this for the sake of its material that so much of the pavement had been broken up. The hypocaust had a very small central chamber from which five channels radiated to the wall-flues. It was worked from a sixth channel, the opening of which was in the stokehole (21), already mentioned, at the north end of the eastern corridor. The hypocaust was built upon the *opus signinum* floor of an earlier one, belonging to a smaller room, which was only 13 feet wide from north to south.

The door or doors of chamber 22 were clearly in the south wall, and it was lighted by windows in the opposite wall. Outside it on the north was found a thick bed of rubbish, consisting chiefly of wall plaster, which had evidently been removed from it when the hypocaust was broken into. Enough fragments of the

[a] The construction of this pavement was as follows: (1) a bed of coarse yellow mortar, 8 inches thick, the upper surface of this was represented over the channels of the underlying hypocaust by the top of a bridging tile, 1½ inch thick, resting upon other tiles at each side, with mortar joints 1 inch thick; (2) a bed of white concrete, 3 inches thick; (3) red cement, 1½ inch thick; (4) fine *tesseræ* embedded in pink cement, with a united thickness of 1½ inch. The thickness of the floor over the hypocaust channels was 7½ inches. The furnace channel was arched over for most of its length by six overlapping layers of tiles, with a seventh across the top. From the floor of the hypocaust to the under side of the bridging tiles was 3 feet 2 inches.

plaster were found to enable the design of part of the painted wall decoration to be made out. To the consideration of this we shall return later.

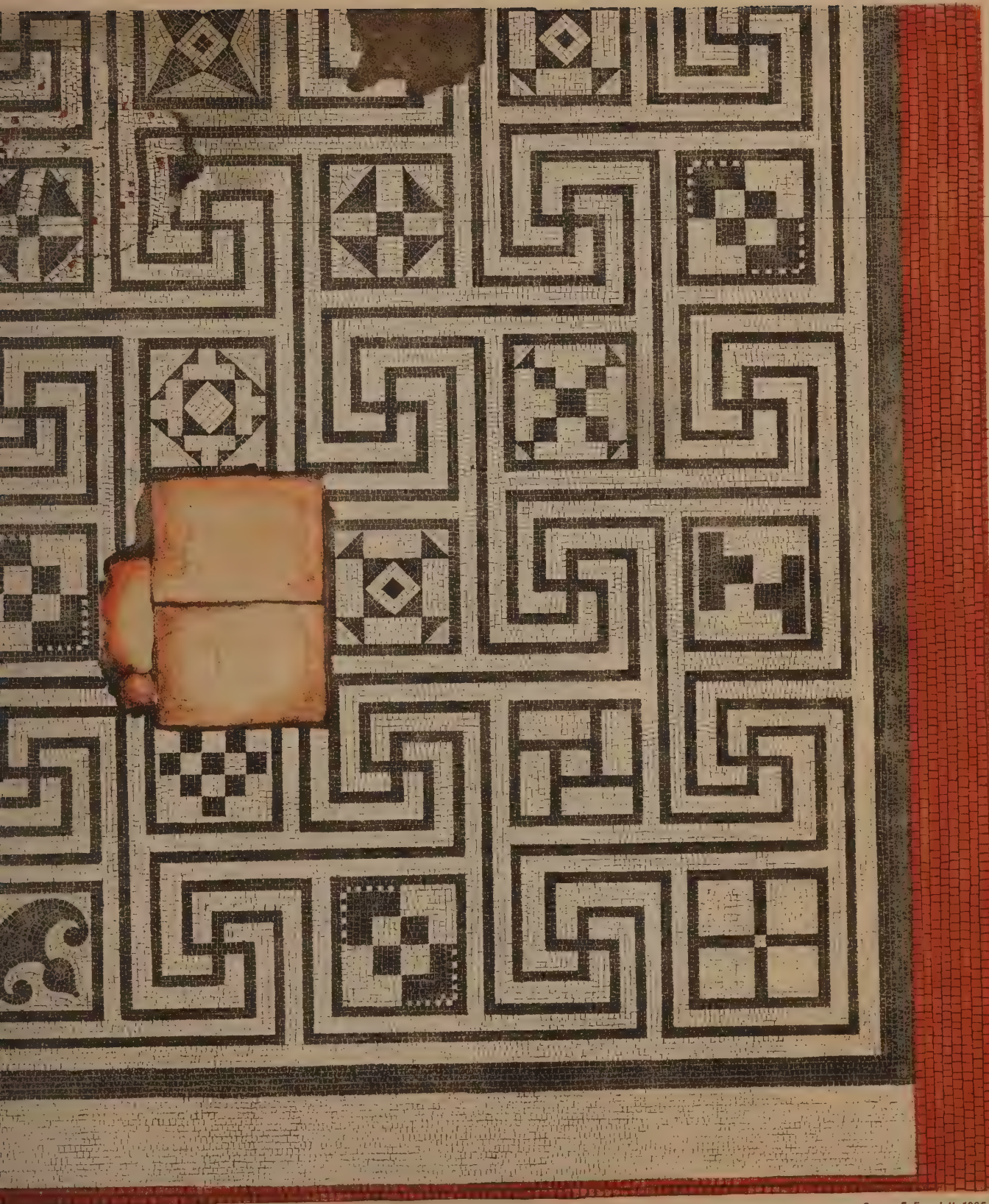
The next apartment southwards (23) measured 20 feet from north to south, and 22½ feet from east to west. It was paved with the usual tile *tesseræ* with a central panel of finer mosaic, 16 feet by 14½ feet, entirely of black and white *tesseræ*. (Plate XIII.) The design was a diaper of black lines on a white ground, disposed in eighty-one compartments, formed alternately of interlacing frets and small square panels enclosing various geometrical figures, triangles, squares, etc. Adjoining the middle of the east side was an additional panel, 6 feet long, with a row of large black squares set diamondwise on a white ground. This panel clearly indicates the position of an opening or doorway from the external corridor. When uncovered this pavement was in almost perfect condition, but it had sustained damage in two places while the house was yet inhabited. The first of these is in the centre of the pavement, and has been rudely restored with mosaic of the same character as the rest of the floor. The whiteness of the new *tesseræ* is in marked contrast to the smoke-stained appearance of the surrounding older portions, and it is probable, as was pointed out by Mr. Herbert Jones, that the damage was due to the long continued presence of a brazier standing on this part of the pavement, the heat from which had gradually destroyed the *tesseræ* beneath it. Not far from this repair two large oblong tiles and parts of another had been inserted in the floor to make good another breach in the *tesseræ*. The north-east corner of the pavement had also been greatly damaged by the action of fire; but not, probably, from the same cause that led to the centre being repaired. Like the pavement already described this one has been taken up for future preservation.[a] Against the middle of the west wall of the apartment the floor had been repaired by the insertion of some fragments of tiles. This probably indicates the existence of a doorway here from the corridor.

The next chamber (24) was 22½ feet from east to west and 18 feet 4½ inches from north to south. It was paved with tile *tesseræ* with a large central panel of fine mosaic, measuring about 15 feet by 14 feet.[b] This had unfortunately been

[a] The construction of this pavement is as follows: (1) 1 inch of pink cement with *tesseræ* set in it; (2) 3½ inches of drab-coloured cement or mortar; (3) 3 inches of white cement containing small pebbles; (4) 5 inches of loose gravel, beneath which was (5) a bed of mortar 1 inch thick.

[b] This pavement was laid as follows: (1) 1 inch of pink cement with *tesseræ* set in it; (2) 2½ inches of white mortar or cement; (3) 4½ inches of hard gravelly concrete; (4) a layer of burnt clay 1½ inch thick; (5) 7½ inches of mould or earth; (6) ½ inch of chalk; and (7) 1½ inch of yellow mortar, very irregular.

SILCHESTER.—MOSAIC PAVE



feet

George E. Fox, delt. 1895

FROM HOUSE No. 1, INSULA XIV.

almost entirely destroyed, and only enough was left to show that the design was made up of sixteen octagonal panels with braided borders, set in a white ground, with a long and narrow white panel on the western side. There were strong signs of burning on the eastern side about both angles. There was probably a doorway into the room from the corridor in the east wall. In the south wall at its west end another doorway communicated with a passage joining the two main corridors.

This passage (25) was 6 feet 3 inches wide and paved with red *tesseræ*, which had been extensively but rudely repaired down the centre with large oblong tiles.

In the south wall of the passage a doorway, $5\frac{1}{2}$ feet wide, opened into the fourth of the large chambers in this wing (26). This was of the same dimensions as the others from east to west, viz. $22\frac{1}{2}$ feet, and 15 feet 4 inches wide.

It was paved throughout with the usual red-tile *tesseræ*, which were laid with considerable care,[a] as indeed were all the pavements of this class in the mansion. Towards the western side, especially in the middle and in the north-west corner, the *tesseræ* were strangely shivered and splintered, although remaining in place, and on this account a large patch of new *tesseræ* had been inserted against the wall, just where we should expect a doorway. The wall here had, however, been too broken down to show if there were a door. In the south-west corner a doorway 4 feet wide led into the last chamber of the range.

This apartment (27) was of large size, measuring $22\frac{1}{2}$ feet by 20 feet $1\frac{1}{2}$ inch. It had a second doorway, 6 feet wide, from the corridor on the west. The floor was of the usual coarse red-tile *tesseræ* with a central panel of finer mosaic 14 feet square (Plate XIV.), which was in very fair condition; it was therefore carefully taken up for preservation.[b] Like the rest, it had a white ground, and was divided into nine large hexagonal compartments by bands of simple braid work or guilloche with intermediate lozenges containing a fret of black lines. The three central compartments from north to south were richer in design than the others, and had each a small panel in the middle surrounded by a band of leafwork. In the central

[a] The construction of this floor was as follows: (1) red *tesseræ*, 1 inch thick, set in $\frac{1}{2}$ inch of pink mortar; (2) 3 to 4 inches of white cement; (3) 11 inches of gravel and builder's rubbish; (4) a bed of hard yellow mortar 5 inches thick. The whole rested on earth containing layers of clay and gravel.

[b] This pavement, which was very evenly and well laid, was constructed of the following layers: (1) 1 inch of pink cement with *tesseræ* set in it; (2) 4 inches of white cement; (3) 7 inches of gravelly concrete; (4) 8 inches of gravelly yellow mortar. The whole rested on a bed of flint.

compartment the small panel contained a vase, while the other two had each a floral ornament. The compartments flanking the central one each contained a large rose within a square, with ornaments in the outer spaces. Of the four corner hexagons, two at opposite corners had broad plaited borders with a central flower-like device. The other two were each surrounded by a wavy scroll in black and white, which enclosed a five-leaved flower with knot-work centre. Attached to the eastern edge was a panel 6 feet long, which had unfortunately been greatly ruined. It had a compartment in the middle, now destroyed, with a handsome border of double braidwork. This panel naturally implies a doorway or opening in the wall in front of it. From the peculiar way in which the red *tesseræ* were returned at either end of the small panel this opening may have been as wide as 8 feet. It led into a small room (28), 15½ feet long by 9 feet 8 inches wide, at the south end of the corridor that traverses this side of the wing.

This corridor was about 75 feet in length by 9 feet 7 inches in width, and was paved throughout with ordinary red-tile *tesseræ*. Its side walls had been utterly destroyed for its whole length, except a small portion at each end of the outer wall.

At its northern extremity a door opened into a large winter room (29), warmed by a hypocaust. This adjoined the east side of chamber 22, and the north walls of both were in the same straight line. It was neither so long nor so wide as the last-named apartment, its actual dimensions being 19½ feet from north to south and 21 feet 2 inches from east to west.

The hypocaust was of the usual composite construction, with a central chamber about 10 feet square, filled with rows of *pilæ* made of square tiles; there were six of these rows in one direction and five in the other. From the centre radiated seven channels, six at right angles and one obliquely, to the wall-flues, but from two of the channels, those on the east side, there branched obliquely a second channel which was also forked at the end. The actual number of wall-flues was therefore eleven, and in seven of these the lowest flue-tile remained in place. The channels had side walls of flint and tiles laid in courses. One of the eastern pair is wider than the rest and was continued on through the wall to the outer air. As the broad channel and stokehole for the fuel is on the north side, this other channel can hardly have been so used also, and it was probably closed by a door which was opened when necessary for greater facility in cleaning out the hypocaust. The pavement of this room was of red *opus signinum*, large portions of which were left over the blocks between the flue channels on the north, east, and south sides. The suspended parts of the floor were unusually thin, there being only 4½ inches between its surface and the under side of the

Scale of [illegible] 0

SILCHESTER.—MOSAIC PAVEME

George E. Fox, delt. 1895

ROM HOUSE No. 1, INSULA XIV.

bridging tiles. As usual, the central and other parts of the hypocaust had been greatly ruined by spoilers in search of building material.

Opening out of the southern end of the corridor, and attached to it externally, was another winter room (30), but of smaller proportions, being only 12 feet in width from north to south, and 13 feet 3 inches in length. The stokehole and feeding passage were on the north side, and from the central chamber six channels radiated in very irregular fashion to the wall-flues. The whole was much ruined and broken down, and nothing was found to indicate the nature of the suspended floor.

In describing the general plan of this eastern wing of the house it was pointed out that its inner or western corridor was returned across the south end. This probably led to the open ground outside on the east, but it no doubt also communicated with certain chambers and adjuncts to the south. To one of these (6), which has already been mentioned, we shall return presently. Immediately to the east of it and the room south of it (3) there seems to have been a small court-yard. A little further east the remains of a floor of red *opus signinum* and fragments of walls, together with traces of a pavement of red-tile *tesseræ* at a somewhat higher level, betoken the existence of a chamber or chambers. These were probably attached to the returned part of the corridor, and lay between it and the street. All was, however, too fragmentary to enable more to be made out than is shown on the plan.

Although the house under notice covered a large area, and contained many rooms,[a] there are very few of these that appear suited for or such as could have been used as bedchambers. Possibly the small apartments along the street front

[a] The dimensions of the rooms are as follows, the first measure being from east to west, the second from north to south: (1) 11 feet 9 inches by 14 feet; (2) 11 feet 1 inch by 7 feet 6 inches; (3) 12 feet 3 inches by 7 feet 6 inches; (4) 13 feet 2 inches by 5 feet 3 inches; (5) 3 feet by 5 feet 3 inches; (6) 5 feet 10½ inches by 14 feet 6 inches; (8) 7 feet 11 inches by 7 feet 7 inches; (9) 14 feet 8 inches by 7 feet 4 inches; (10) length uncertain, 7 feet 4 inches wide; (11) 7 feet 7½ inches by 17 feet; (12) 19 feet 9 inches by 17 feet; (13) 17 feet 2 inches by 17 feet 6 inches; (14) 17 feet 9 inches by 12 feet 8 inches; (15) 17 feet 9 inches by 15 feet 8 inches; (16) 17 feet 6 inches by 22 feet 4½ inches; (17) 17 feet 6 inches by 20 feet; (17a) and (17b) each 17 feet 6 inches by 7 feet 6 inches; (18) 17 feet 6 inches by 20 feet; (19) 22 feet 6 inches by 18 feet 3 inches; (20) 23 feet by 18 feet; (21) 8 feet by 15 feet 9 inches; (22) 22 feet 3 inches by 23 feet 4 inches (mean); (23) 22 feet 4½ inches by 20 feet; (24) 22 feet 4½ inches by 18 feet 4½ inches; (25) 22 feet 5 inches by 6 feet 3 inches; (26) 22 feet 6 inches by 15 feet 4 inches; (27) 22 feet 6 inches by 20 feet 1½ inch; (28) 9 feet 8 inches by 15 feet 4½ inches; (29) 21 feet 2 inches by 19 feet 6 inches; (30) 13 feet 3 inches by 12 feet. The thickness of the walls varies considerably. In the older part of the house the average is 18 inches, but in the eastern wing the main walls are 2 feet thick.

in the south wing, and some of those taken out of the external corridor on the west side may have served the purpose. If so, they would be for the servants only, and we have still to find accommodation for the master of the house and his family. It is very likely that their bedchambers were in an upper floor over the whole of the southern half of the south wing, and the chamber we have numbered 6 naturally suggests itself as a convenient site for the staircase. It would thus be connected directly with the principal part of the house, where the family obviously lived, and as that was completely shut off from the rest of the mansion, the approach and access to the sleeping rooms would always be private. The large size of the fine suite of rooms in the chief wing hardly suggests that there was a second story above them.

A reference to the plan of the house and to the difference in the thicknesses of its walls will show that it is not all of one date. We have previously noticed and placed on record the fact that the earlier buildings at Silchester had thinner walls than the later, and in the house under notice the south and west wings are on this account obviously older than the eastern range. It has already been pointed out that alterations have been made in the northern half of the western wing, but we have yet to consider what has taken place on the opposite side of the mansion. At first sight the eastern range from its superior importance and thicker walls seems to be an addition to an older house of the usual courtyard type. This is, however, not the case. It has been partly rebuilt and somewhat enlarged, but in its main lines it follows the original plan, and under several of the later walls are the strong and good foundations of the earlier ones. This is especially the case beneath the outer walls of the two long corridors as well as under the party wall between the two northernmost chambers. The other party walls, as may be seen from their thinness, belong to the older work.

It is not unusual in Roman houses to find that the *tesseræ* or other floors were laid and carried close up to the walls before these had received their plaster facing, the junction of wall-plaster and pavement being subsequently masked by a thick quarter-roll of plaster. But in the earlier party walls above mentioned this feature is reversed, and the mosaic floors of chambers 23, 24, 25, and 26 were found in each case to abut against the wall plaster. Further examination showed that the wall plaster continued downwards for some inches and was then broken away. It was evident, therefore, that in each case a new floor had been laid at a higher level, the older ones having first been broken up for the sake of the materials.

In room 26 a cutting below the pavement revealed the mortar bed of a floor at a depth of about 14 inches, covered with a layer or filling in of builder's rubbish

containing pieces of painted wall plaster. Other hard beds appear to underlie the pavements of the other chambers. (See the sections of the floors quoted above.) The change of level is clearly shown in the remains found to the extreme south of the wing, where an older *opus signinum* floor, which was not worth breaking up, is 5 inches below the level of the new floors of the range, while close by, at the higher level, is part of a red mosaic pavement of the later date.

The proofs of an enlargement of this range are as equally clear as those of alterations. It was pointed out in describing the hypocaust beneath the northern-most chamber (22) that it was an enlargement of an older one, and since the north wall of the rebuilt chamber and that of the other winter room east of it are in line, and also form a small angle with the main walls of the range, they are probably of the same date. The third winter room at the south end of the outer corridor is also most likely an addition.

Underlying the north part of the house was a wall of some enclosure of yet earlier date. Its western extent has not been traced, but it certainly ran from the party wall between chambers 19 and 20, under the two winter rooms, and as far as the next house, just before reaching which it was returned southwards, and finally passed under it. It would be useless to try and conjecture to what it may have belonged.

Before leaving House No. 1, a few words must be said on the objects found in and about it. The various rooms and corridors, as usual, yielded nothing of any interest, but from the pits beneath the walls and chambers were obtained several objects of exceptional character. These pits were fourteen or fifteen in number. A remarkable group of seven lay close together under the eastern half of the south wing. They were of earlier date than the house, for the walls and floors that crossed them had subsided into them, after the ruin of the mansion, in an extraordinary fashion. Beyond a few fragments of pottery near the surface, these pits yielded nothing, and it is possible that they were water-holes of an early date that had been filled up shortly before the house was built. Several other pits were obviously of the same character. This, however, was not the case with two of them. One that underlay the wall near the south-west angle of the house was unquestionably a Roman rubbish-pit. From it were obtained the pieces of two large pseudo-Samian bowls of early type, as well as other vessels of the same ware.

From beneath these were also recovered sixteen fragments of a bowl of marbled glass, of sapphire blue colour streaked with white and with yellow spots. The pieces have been put together, and most fortunately none is missing, so that

the bowl is now perfectly restored save for one or two minute splinters, which were probably lost when it was broken. The bowl is $4\frac{1}{4}$ inches in diameter and $2\frac{1}{8}$ inches in depth. It has been pillar moulded, but was afterwards ground smooth inside and for a depth of $\frac{1}{2}$ inch from the lip outside. The pillars on the exterior start from the ground band and gradually taper downwards with a slightly spiral direction.

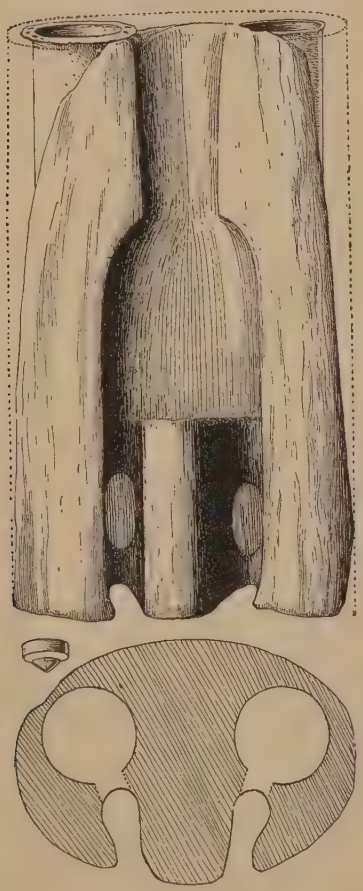


Fig 1. Elevation and section of a block of wood and lead cylinders found in a well or pit in *Insula* XIV. ($\frac{1}{8}$ linear.)

Fragments of similar bowls have been found in previous excavations at Silchester, but, as in other places in Britain, their occurrence is very rare, and no complete example has hitherto been recovered in this country. Such glass was, of course, an importation from Italy.

The other pit whose contents call for notice was beneath the corridor wall on the west side of the inner courtyard, in line with the well. At the bottom of this, which was about 9 feet deep, lay a very remarkable object. It is a block of wood (fig. 1), seemingly oak, $22\frac{1}{2}$ inches long, and now roughly wedge-shaped, but originally its sides seem to have been parallel. The broader end, which was the base, measures 13 inches by 9 inches. Towards the top the wood has perished somewhat from decay. The block is pierced throughout its length by two large cylindrical holes, which, when we found it, contained each a section of stout lead piping. The pipes or cylinders are a little over 22 inches in length, and have been formed from pieces of sheet lead, $\frac{3}{16}$ inch thick, which have been bent round a mandril and the joint filled up with melted lead. Their internal diameter is exactly 3 inches. Round the top of each was a projecting lip or flange 1 inch wide. From one pipe this has wholly decayed away, but a good deal of it is left

on the other, and it retains the holes of the nails by which the pipes were held in place in the block. Besides the two cylindrical holes that contained the pipes, one face of the block is traversed by a chase from which a totally different series of pipes has been removed. Commencing at the top, there was a pipe about 8 inches long, and apparently $2\frac{1}{2}$ inches or so in diameter, with a trumpet-shaped mouth. It opened at the bottom into a flattened bell-shaped chamber about 7 inches long and 5 inches wide, from which descended two parallel lengths of piping about 2 inches in diameter and at least 7 inches long. Just above the base of the block there is a passage, or rather perforation, from each of the channels for the small pipes into the larger cylindrical holes, showing that originally the lesser pipes were connected with the others by short branches. This arrangement was afterwards altered, for the existing pipes, which are practically perfect, show no traces of the attachment of such branches. Either, then, new pipes of a different pattern have been substituted for the older, or others for another use have replaced the originals. The smaller pipes were perhaps taken out at the same time, otherwise it is not easy to account for the larger pipes being left and the others removed, when both sets were equally valuable for the sake of the lead. Within one of the branch holes was found a leaden weight, such as might have been fixed on the upper surface of a leather valve by means of a rivet passing through to the under side.

Whatever may have been the subsequent use of this singular contrivance, there can be little doubt that in its original state it contained a force pump identical in character with that described by Vitruvius[a] as the *Ctesibica Machina*,

[a] The following is the description given *De Ctesibica Machina* by Vitruvius: "Insequitur nunc de Ctesibica machina,quæ in altitudinem aquam educit, monstrare. Ea fit ex ære, cujus in radicibus modioli fiunt gemelli paulum distantes, habentes fistulas, furcillæ sunt figura, similiter cohærentes, in medium catinum concurrentes: in quo catino fiant axes in superioribus naribus fistularum coagmentatione subtili collocati, qui præobturantes foramina narium, non patiuntur exire id, quod spiritu in catinum fuerit expressum. Supra catinum penula, ut infundibulum inversum, est attemperata, quæ etiam per fibulam cum catino cuneo trajecto, continetur et coagmentatur, ne vis inflationis aquæ eam cogat elevare: insuper fistula, quæ tuba dicitur, coagmentata, in altitudine sit erecta. Modioli autem habent infra nares inferiores fistularum axes interpositos supra foramina earum, quæ sunt in fundis: ita de supernis in modiolis emboli masculi torno polito et oleo subacti conclusique regulis et vectibus convolvuntur, qui ultro citroque frequenti motu prementes aerem, qui erit ibi cum aqua, axibus obturantibus foramina, cogunt et extrudunt inflando pressionibus per fistularum nares aquam in catinum, e quo recipiens penula spiritu exprimit per fistulam in altitudinem. Et ita ex inferiore loco castello collocato ad saliendum aqua subministratur." *De Architectura*, lib. x. cap. xii.

or machine of Ctesibius.[a] The large lead cylinders or barrels (*modioli*) would be fitted with valves (*axes*) at the bottom, and with pistons (*emboli masculi*) worked from the surface by rods (*reguli*) attached to a rocking handle or lever. The lesser pipes (*fistulæ*), which must have been closed or sealed at the bottom, had valves at their upper ends where they opened into the receiver (*catinum*); and between these valves and the sealed ends were the short branches connecting them with the large barrels. The upper part of the receiver consisted of a conical cover (*penula*), from the top of which a rising-pipe (*tuba*) ascended to the surface. The existing lead barrels show no traces of valves, connecting branches, or of pistons having worked in them, and they are cut off quite flush at the bottom. They cannot therefore be the original pair.[b] The accompanying diagram (fig. 2) represents a probable restoration of the working parts of the Silchester pump.

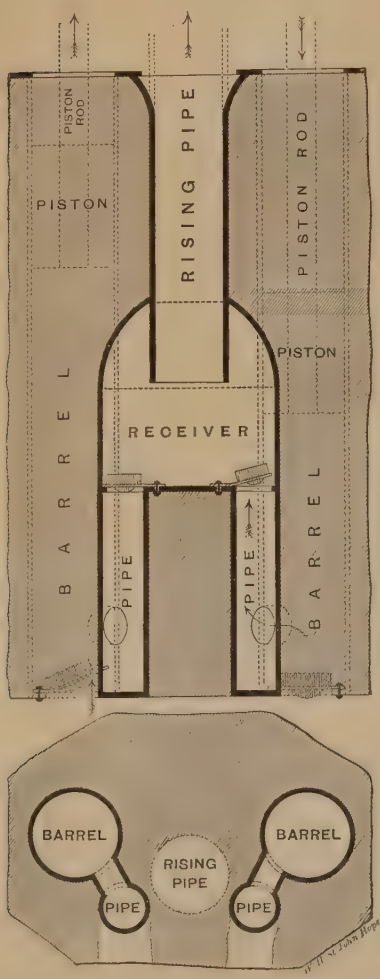
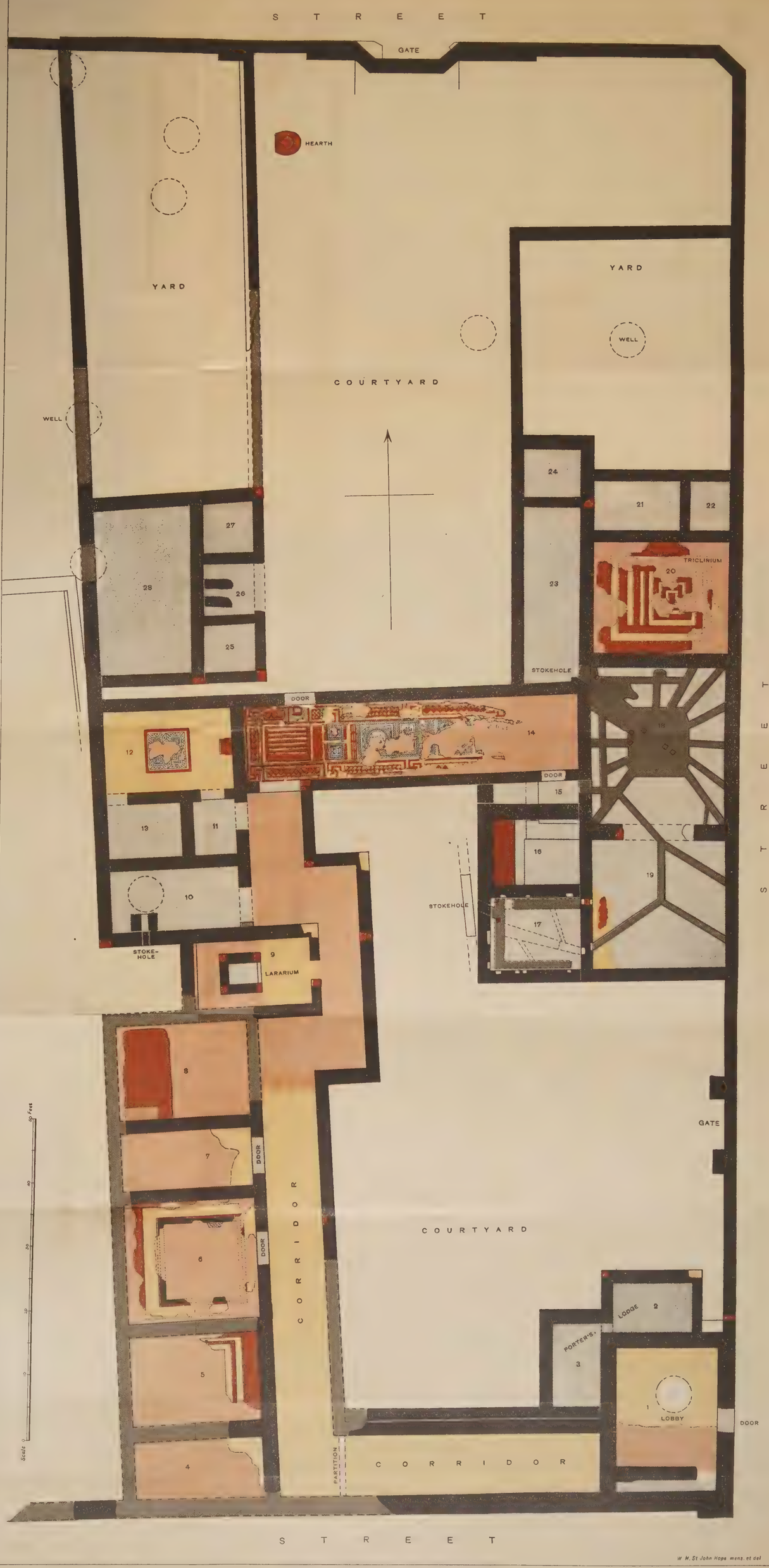


Fig. 2. Conjectural restoration of a Force Pump found at Silchester in *Insula* XIV. $\frac{1}{8}$ linear.

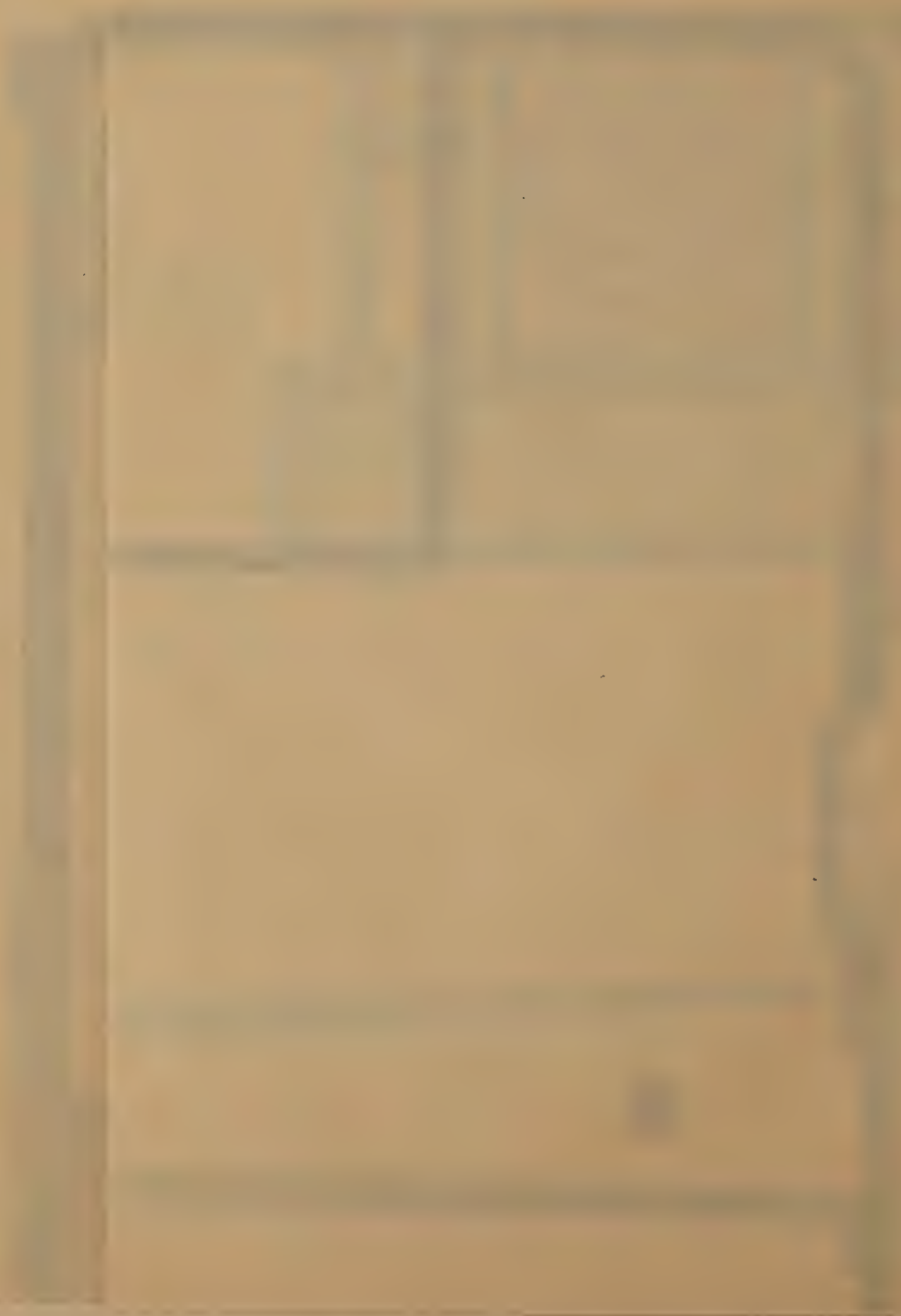
We now come to the consideration of House No. 2. It belongs to the courtyard type, but, unlike House No. 1, it is extremely irregular in plan (Plate XV.). The main wing was built against the division wall common to the two sections of the *insula*, and ran northwards from the street on the south for 129 feet. To the north of this wing, but detached from it by a

[a] The identity of the Silchester contrivance with the *Ctesibica machina* of Vitruvius was first pointed out to us by Mr. J. T. Micklethwaite, F.S.A.

[b] A pump of similar construction to that described by Vitruvius, but of bronze, was found some years ago at Bolsena, in Italy, and is now in the British Museum. Another example of the same kind, found in 1795 at Castrum Novum, near Civita Vecchia, is engraved in Smith's *Dictionary of Greek and Roman Antiquities*, 3rd edition (London, 1890), i. 570, s.v. Ctesibica Machina. Although neither of these resembles the Silchester specimen, the principle on which they are constructed is identical. A description of the Bolsena pump is appended to this paper.



SILCHESTER.—PLAN OF HOUSE No. 2, INSULA XIV.



narrow interval, was a small block of offices, with a large yard extending up to the main street of the city. The courtyard of the house lay between the principal wing and the street bounding the *insula* on the east. It was enclosed on the south by a narrow wing extending along the street there, and on the north by another wing, connected with which was an important series of winter rooms built in a row upon the street dividing *Insula* XIV. from *Insula* II.

Like House No. I., that under notice evidently had a gateway of some importance from the main street on the north, but of different plan, the large piers of the other gateway being represented here by an increased thickness of the wall on either side of the gate. The opening was therefore probably spanned by an arch, and the gate itself seems to have been set, as it were, behind it with sloping jambs. The roadway through it was paved with flints and gravel. The courtyard into which the gateway opened was L-shaped, and measured 100 feet from north to south, and 76½ feet from east to west. The buildings, etc. that opened upon it will be described further on.

The second, or inner, courtyard, round which the house was built, was of irregular form, and enclosed on three sides by the main divisions of the mansion. It was entered from the street on the east by a gateway 8 feet wide flanked by piers. The trenches driven across it revealed neither well nor pits, nor anything else of interest.

The entrance to the house was in the same street, at the eastern end of the corridor which formed the southern wing. It opened into an unusually spacious vestibule (1), 22 feet 4 inches long and 16 feet 2 inches wide, but 4 feet of its length was cut off at the south end, probably for a staircase to an upper floor about 50 feet long above the corridor. The existence of this upper floor seems proved by the fact that the north wall of the corridor has been doubled in thickness, not necessarily to support it, but to gain greater width above than was afforded by the corridor itself, which was only 9 feet 3 inches wide. At the same time two rooms (2 and 3) were added on the north and west of the vestibule, probably as a lodging for the porter. These also probably had rooms above them communicating with those over the corridor. Chamber 2 does not abut upon the street, but there is a space between them 3½ feet wide, in the end of which there appeared to be the remains of a latrine or urinal with a tile drain running through the wall into the street. Nothing was found to show how chambers 2 and 3 were paved, but the vestibule and corridor both had floors of drab stone *tesseræ*. The corridor seems to have been closed at its west end by a partition, so as to shut it off from the main corridor of the mansion. This corridor was 8 feet 9 inches

wide, and extended from the street on the south northwards for 111 feet. It was paved throughout with coarse mosaic of drab stone. Originally it was doubtless straight from end to end, but at some later period a chamber near its upper extremity seems to have been extended across it, and it was then altered so as to pass round the end of this chamber.

On the west side of the corridor lay the main body of the house.

The first chamber (4) at the south end was paved in the same way as the corridors. It was somewhat narrower at one end than the other, in consequence of the house being built not quite at right angles to the street.

The next chamber (5) was of ampler proportions. Its pavement, of red tile *tesseræ*, had a central panel of fine mosaic within a triple border of the coarse kind, formed of two bands of drab stone with an intermediate one of red tile. The central panel had unfortunately been entirely destroyed, only a few of its cubes being left in one corner.

Chamber 6 was the principal room of the range, and probably served as the *tablinum*. It measured 20 feet 10 inches by 18 feet 9 inches, and had a pavement of somewhat elaborate character. The ground was of the usual coarse red *tesseræ*, with a central panel of fine mosaic, about $11\frac{1}{2}$ feet square. This was bordered, first by a band of blue *tesseræ* 9 inches wide, then by a red band 5 inches wide, and thirdly by one of drab stone varying in width on the four sides from 18 to 28 inches. The border was of coarse *tesseræ*, like the red ground. Of the mosaic centre only a small fragment of a braidwork border and a few *tesseræ* in one corner remained. The room appears to have been entered from the corridor by a doorway 5 feet wide.

The next room northwards (7) was a long and narrow one of the same dimensions as 4, but with parallel walls. There was an opening, 5 feet 9 inches wide, into it from the corridor. It was paved with drab stone mosaic, but in the north-west corner, against the wall, was a patch of red tile *tesseræ*.

Chamber 8 measured 15 feet by 20 feet $10\frac{1}{2}$ inches. At its upper end there remained part of its floor of the usual coarse red mosaic, but in the south-west corner there was inserted in this against the wall a panel of drab stone *tesseræ*. Not improbably this and the red patch on the other side of the wall show that there was a doorway at this point.

Besides the upper floor over the southern corridor, which probably contained storerooms as well as cubicles or bedchambers for the servants, there must have been further accommodation for the sleeping rooms of the master of the house and his family. We would venture to suggest that these apartments formed an

upper story over the range of rooms just described, and were reached by a staircase placed in the narrow space (4) to the south next the street.

On the west side of this suite of chambers was made a curious discovery. Lying on the ground alongside the line of wall, from the street to just round the corner of chamber 8, was a row of broken roofing tiles. They lay with their undersides uppermost, and further examination showed that beneath every junction lay a corresponding *imbrex* tile, also upside down. From the regularity of the tiles, even in their fallen state, it is evident that they had formed the bottom row of the roof of the range of chambers alongside which they lay. They had not simply slipped off, but the woodwork to which they were attached must suddenly have been overbalanced through the removal of the other rows above, and have so revolved in falling as to deposit the remaining row of tiles in the reversed position in which we found them. As the tiles had not any nail-holes in them, they must have been laid with mortar only upon the woodwork that supported them; the roof, therefore, could only have been one of very low pitch.

Chamber 9, from its peculiar character, requires a more detailed description than those previously noted. It will be seen from the plan that towards its western end lay the remains of a small square detached structure. These remains, when first uncovered, were taken to indicate the presence of a well, but further examination did not confirm this opinion. Then, as the excavations were continued and a neighbouring hypocaust was revealed, it was erroneously supposed that they had to do with the furnace room of that hypocaust, which was situated just behind them. Finally, the discovery of the back wall of the chamber showed them to be the substructure of a small square erection which stood isolated at the west end of the room. Further examination proved that the chamber had been floored with similar mosaic to that in the adjoining corridor, and that a panel of finer work had been laid in front of the square foundations. Fragments of wall plaster, of a delicate blue colour, were also turned up, which, together with the mosaic work, made it evident that this chamber was one of some importance in the mansion.

The foundations named had supported, there is little doubt, an *aedicula*, or shrine intended to contain the images of the household gods, together with an altar, and the room might therefore be considered a *lararium* or domestic chapel.[a] A frag-

[a] Such chapels are occasionally found in the houses of Pompeii. A good example of such a one may be seen in the house of Epidus Rufus in that town, where an *ala* of the *atrium* is devoted to this purpose. It contains an *aedicula* for the sacred images to which this at Silchester must have had considerable resemblance.

ment of a capital found in this house (fig. 3) may have formed part of one of the columns adorning this erection.

Judging from the plan of the house, it seems that originally there was a recess only in the corridor at this spot, possibly with a niche in the back wall and an altar in front of it. Afterwards the *aedicula* was built in the recess, the side walls of which were prolonged eastward to form the chamber enclosing it, and they were then joined by an eastern wall in which a doorway was made from the corridor. At the same time the corridor was altered to pass round the end of the chamber.

Fig. 3.
Fragment of a Capital found in House No. 2, *Insula* XIV. ½.

The discovery of this *lararium* is an important one. Up to the present time it has been impossible to fix definitely the locality devoted to the worship of the household gods in any of the houses which have been uncovered at Silchester. Usually in Roman houses, a niche in the wall, paintings about it of the accustomed figures, and an altar in front, were all that marked the spot devoted to that worship, so that if the wall which contained the niche or was covered with the painted effigies were swept away, nothing whatever would remain to indicate the place sacred to the familiar deities. The walls of all the houses at Silchester have been thus swept away. It is only, therefore, as in the example before us, when a chamber is found containing apparently an elaborately built-up shrine, that we are able to recognise the existence of *lararia* in a Romano-British city.

It may be that the single chamber to be found projecting from the corridors of some of the houses, generally in front of the main rooms, held an altar, and possibly also had a niche in one of its walls to contain the sacred images.[a]

It has been suggested that the small square building situated in the courtyard of House No. 1 of the *insula* under notice may have been a shrine to the *lares*. This is doubtful from its exposed position. It is worthy of remark, that it seemed to have been purposely destroyed. An even bed of clay had been formed or spread over such traces of foundations as remained, as if to serve as a bed for some kind of floor to the courtyard.

If it be supposed that the Romanised Britons adopted the fashion of having a chamber in their houses consecrated to private worship, a question arises, which is not easily answered (at least at Silchester), what were the divinities adored in

[a] For such chambers see a trace in House 1, *Insula* I.; House 4, Chamber 3, *Insula* VII.; House 1, Chamber 6, *Insula* VIII.; also a projection from the western corridor of the *Hospitium* in the same *insula*, and a room projecting from the centre of the corridor of a small house called by Mr. Joyce, Block I. (*Archaeologia*, xl. pl. xxiii.*)

these *sacraria?* In the houses of Roman settlers, or in those of Roman descent, images of the *lares* would certainly be found, similar in most respects to a small bronze statuette[a] dug up at Silchester some seventy years ago (fig. 4), but images other than these must have been the occupants of the places set apart for worship in the houses of the Romanised Britons. There has been a singular absence of effigies of the gods in our explorations at Silchester. The only characteristic finds, in fact the only finds, have consisted of a headless statuette of a female figure, fully draped, seated in a wicker chair and nursing two infants, and three fragments of statuettes of a Venus of well known type. These fragments all belong to a class well known in France, specimens of which are occasionally found in this country.[b] They are of pipeclay or white terra-cotta. The figures resembling the seated female effigy are called by some antiquaries the goddess mothers, by others images of Latona or Juno Lucina. There is an opinion that such effigies as these, and others in stone of small dimensions, may have been worshipped as household gods in Gaul, and it seems possible that the images of similar divinities may have found a place also in the houses of the Romanised Britons.[c]

Fig. 4.
Bronze Figure found at Silchester. ¼

It appears a likely conjecture that the absence at Silchester of images of the gods privately or publicly worshipped may be accounted for by the fact of the continued existence of the city through the Christian period of Roman rule (at

[a] Now in the possession of W. G. Mount, Esq., M.P., of Wasing Place, Berks. See *Proceedings*, 2nd Series, xvi. 74.

[b] Edmond Tudot, *Collection de Figurines en Argile de l'Époque gallo-romaine*, 1860.

[c] *Revue Archéologique*, troisième serie, iv. 285. Ed. Flouest, *Archéologie Gauloise. Deux stèles de Lavaire.*

least a century) during which the effigies of the Pagan deities were either destroyed or hidden away.

After this digression we will proceed with the further consideration of the plan of the house.

Next to Chamber 9, which we may reasonably presume to have been a *lararium*, was a group of four rooms (10—13). On plan these form a continuation of the main range, but they were actually cut off from it, at any rate in later times, by the *lararium* and a small open court on the west of it.

Chamber 10 was entered from the corridor by a doorway in the west wall. Originally it was warmed by a hypocaust, but this was subsequently disused and the archway of its stokehole walled up. We found that the suspended floor, and the *pilæ* that supported it, had been entirely removed, and there only remained the two blocks that flanked the stokehole to tell the tale. The hypocaust was fed from the little court on the west of the *lararium*.

Chamber 11 was a small and nearly square one with doors or openings in its east and north walls. It seems to have served as a lobby or vestibule to chamber 12.

This apartment (12) had a pavement of drab stone *tesseræ*, very well laid, in the centre of which was a small panel of fine mosaic, surrounded by a narrow border of coarse red-tile *tesseræ*. The design was composed of black lines on a white ground with angle-panels of braid-work. The lozenge-shaped centre, which had unfortunately been almost totally destroyed, had also a braid-work border. The design is practically identical with the minor portions of the fine but mutilated pavement in chamber 22 of House No. 1, and was not improbably laid down at the same time and by the same workmen. But the most peculiar feature in this room was a small fireplace of tiles built upon the floor against the middle of the east wall. It had cheek-pieces of tile, and not improbably three other tiles set as a half hexagon in the wall formed the back of the chimney. Such internal fireplaces are very rare. Good examples were once to be seen in the Roman *villa* at Bignor in Sussex,[a] and others have been found, we believe, in the north of England.

A doorway in the south-west corner of chamber 12 opened into chamber 13. Its floor had been wholly removed. In its south wall, or in that of 11, was probably a door into chamber 10, so that the three chambers 10, 12, and 13 with the vestibule (11) formed a suite parted off from the rest of the house.

[a] Samuel Lysons, *Reliquiæ Britannico-Romanæ* (London, 1817), iii. pl. xx. figs. 2, 3, 4.

At the north end of the corridor that flanked the whole of the chambers just described was an opening 6 feet 6 inches wide, crossed by a step, into a long hall or gallery, 12 feet in width and 54 feet 2 inches in length. This stood east and west, and led to a suite of large winter rooms, which were otherwise detached from the main body of the mansion.

The remarkable feature about the hall was its mosaic pavement. Although of inferior design, it was very elaborate in character. The general ground was of drab-coloured stone, with a border about 3 feet wide, marked by a broad band of red-tile *tesseræ* on each side of it. The interlacing of these bands formed a fret at the corners and at three equidistant places along the sides, and thus broke up the border into long and narrow panels, filled with two varieties of checker-work of red-tile *tesseræ*. The end panels were also of the same checker-work. At one place, near the west end, the design of the first panel on the north side was interrupted by the intrusion of one of a different character, which formed, as it were, a mat to a doorway opening into the hall from the outer courtyard.

The central portion of the pavement was treated in the most capricious fashion. Beginning at the west end, there was first a sort of gridiron panel, formed of red bands on the drab ground. Next came a broad transverse band of red, followed by two oblong red panels placed side by side. In each of these was inserted a small panel of fine mosaic, 31 inches square, with central floral device and braidwork border. Beyond these again was a narrow transverse band like a grating formed of lines of red upon the drab ground.

The next 20 feet or so were occupied by a succession of panels of fine mosaic. The first was about 6 feet square, and had in the centre, on a white ground within a circular border of braidwork, a bust, but this had unfortunately been almost destroyed; it was set in a square frame of brown with black edges, beyond which again the white ground had a border of braidwork.

The second panel was an oblong one, 3 feet 4 inches in width by 5 feet 10 inches in length. It had an outer border of braidwork, then a narrow medial one of pale brown, with an inner one of black and white, the ground being drab. In the centre was a circular medallion with a black and white frame, but the device within it had been destroyed. At each end was represented a red and white basket filled with blue flowers, with a large pendent leaf on either side. One of the baskets had unfortunately been broken up.

The third panel was separated from the second by a wider interval than that between the second and first, and measured 10 feet 2 inches in length by 6 feet $4\frac{1}{2}$ inches in width. It had a ground of small drab *tesseræ*, in which were set a

square central and two oblong side sub-panels. The central sub-panel was so ruined that nothing could be made out as to its design. It had a white ground with quadrant-shaped corners, all within a braidwork border, which also surrounded the quadrants. The side sub-panels each contained three compartments, of which the two end ones were filled with interlacing knotwork; the central compartment was almost destroyed. A key-pattern border enclosed the whole.

Next to this composite panel was a transverse band of coarse mosaic, but of half-inch cubes, composed of alternate narrow red and long white compartments, with a narrow counter-changed border.

Beyond this was another series of panels of fine mosaic, but with the exception of fragments of two, that were apparently for the most part white with black lines, all had been hopelessly destroyed by the comparatively recent action of a "scarifier."

The one-inch *tesseræ* of red tile and drab stone which formed a groundwork for the fine panels of the central division were not nearly as well squared or so regular in dimensions as those of the floors in House No. 1. The tile *tesseræ* varied visibly not only in size but in tint, and were interspersed with black overburnt specimens in an unsightly fashion. With respect to the design, it is common enough to find a pavement of fine work set in a ground of coarse material, but it is not common to find that ground enriched with ornament.[a] It looks very much as if the whole pavement had originally been composed of red and drab *tesseræ*, and that subsequently the central division had been partly removed to give place to panels of finer work in different colours, inserted in rather promiscuous fashion. Even this finer work is indifferent enough and wanting in distinction.

The materials of the *tesseræ* are, with one exception, the same as those used in the floors of House No. 1. The basket of flowers represented in the long panel has a certain number of *tesseræ* in two shades of blue. These appear to be cubes of glass paste, an uncommon material in mosaic floors.

It would seem that the owner of House No. 2 was either less fortunate in the choice of mosaic workers than his neighbour or that the floor in question is later than those in House No. 1, and this is perhaps the more probable conjecture.

Before finally leaving the pavement of the hall two curious features may be mentioned. Near the middle of its length was found a thick patch or deposit of mortar, and traces of another such patch were visible elsewhere. These may

[a] See for an example of this arrangement a floor found at Scamton in Lincolnshire in 1795, figured in Fowler's *Mosaic Pavements*.

point to a period in the history of the house when its mosaic floors were so little thought of that they were actually used to mix mortar upon for repairs by the then tenants of the mansion. A still later phase, perhaps, is indicated by the traces of burning visible in the centre of the hall, where the floor has been destroyed by the action of a fire lighted upon it, possibly the work of wandering herdsmen who sought shelter amidst the ruined walls.

In the south wall of the hall, near its east end, was a doorway into the winter rooms of the house. These originally formed a range placed transversely to the end of the hall and lining the street on the east side of the *insula*. But other rooms were subsequently added on the south-west, in the angle formed by the range and the hall, and these were balanced to some extent on the north by a narrow set of offices. The doorway from the hall at first opened into a small square chamber (15), placed in the angle, which served as a lobby to the principal room east of it. This room (18) was 25 feet 3 inches long by 21 feet 8 inches wide, and was warmed by a composite hypocaust of somewhat elaborate construction. The stokehole was in the north-west corner. The position of the wall-flues indicated that there was a doorway on the north side into the next room, and that the windows were in the south wall. Of the pavement no traces were met with.

To the south of this room there was afterwards added another of nearly the same size, and a wide opening made in the party wall, so that the two practically formed one great apartment nearly 50 feet long. At the same time the flues of the hypocaust in the older chamber were extended into the addition so as to give three more wall-flues. The presence in the south-west corner against the wall of patches of drab and of drab and red *tesseræ* may perhaps indicate the existence of a central panel of fine mosaic with a parti-coloured ground, as in the pavements of the main wing of the house.

At a still later period were added the two chambers (16 and 17) on the west of the apartment just described. This addition entailed the destruction of the small lobby before mentioned, which was now replaced by a narrow strip 14 feet long and $3\frac{1}{2}$ feet wide between the new rooms and the hall. This perhaps contained a staircase to an upper floor. A new entrance was probably made at the same time from the hall directly into the large winter room (18).

The northernmost of the new chambers (16) had beneath its floor one side and an angle of the old lobby, to which an older wall was attached on the west. This wall was parallel with the west wall of the chamber, from which it was distant about $3\frac{1}{2}$ feet. Between them was a sunk area 2 feet deep paved with coarse

red *tesseræ*. The lines of these, however, were not quite parallel with the side walls, and they clearly formed part of a floor of some still older construction, or perhaps a former wing of the mansion. A short length of a wall of this, which was found outside on the west, was evidently connected with the pavement, from its parallelism with the lines of the *tesseræ*. The floor of chamber 16 had been destroyed.

The second of the added chambers (17) lay to the south of the other, with which it communicated by a door in the dividing wall. It was warmed by a hypocaust, the construction of which differed from any we have yet found at Silchester.

The stokehole was on the west and had an arched opening to a diagonal passage through the wall, which led into a narrow oblong compartment parallel with the wall, and containing two *pilæ*. At the north end of this compartment a short and narrow passage of triangular section led into a second compartment about 15 feet long, built against the north wall of the room. The south end of the first compartment opened into another but somewhat larger triangular passage that led in the same direction to a third compartment or flue traversing nearly the length of the south wall. Out of these three compartments opened the wall-flues. From the first-named compartment a branch flue of triangular section started at a higher level and passed diagonally down the room to a flue in the east wall. From it two lesser flues, square in section, communicated obliquely with the side compartments. Both the square and the triangular flues were constructed of large tiles. No remains existed of the floor that had overlaid this curiously contrived hypocaust.

It may be here pointed out that the end flue of the northern compartment seems to have been a double one, so constructed as to serve both chamber 17 and chamber 19.

On the north of the large winter room (18) was another large chamber (20). It had a mosaic floor of a very rude description, the *tesseræ* of which were of all sizes and shapes, and seem to have been laid down almost at haphazard. The design was peculiar, being formed of concentric bands of red tile and drab stone surrounding a small oblong panel.[a]

This arrangement is worthy of note because it may show the special use to which the chamber was put, namely, as a *triclinium*. The small oblong panel

[a] Such an arrangement of concentric lines is to be found in the remains of the floors of the corridors of a large Roman villa in the Greetwell fields near Lincoln. *Archaeological Journal*, xlix. 258.

would indicate the spot for placing the table, with its couches on three sides, while rows of parallel bands of red and drab *tesseræ* on the fourth side marked the space reserved for the service.[a]

On the north of the *triclinium* were two chambers (21) and (22) of unequal size. The larger was perhaps a kitchen, and the smaller a pantry or some such office.

On the west side of the *triclinium* was a long and narrow annexe with a small chamber at its north end. It was probably roofed in, and contained the stoke-hole for the great hypocaust under chamber 18, and no doubt the store of fuel for it.

To the north of the several offices just described was a large yard 37 feet long and $33\frac{3}{4}$ feet wide. In the middle of this was a well 30 feet deep. It will be remembered that in 1894 we found a well in House No. 1, *Insula* IX., which had at the bottom a large wooden tub instead of the usual square timber framing. This well in *Insula* XIV. had at the bottom two such tubs one above the other. The sides of the shaft unfortunately collapsed and destroyed them before they could be properly examined.

The western side of the outer courtyard had a somewhat similar arrangement to that on the east side. The block of chambers consisted of three small offices (25-27) with a large one (28) behind, and north of these a yard, 27 feet wide and 71 feet long, extended as far as the main street. The second of the small offices (26) had two parallel masses of masonry against its back wall, which may have been the support of a stone table. In the room behind were found the fragments of two *mortaria* of the largest size, and of several bowls of red earthenware with flat rims of a form not hitherto observed at Silchester.[b]

[a] A little panel of rich work in a large plain field is occasionally found in the mosaic floors of *triclinia* in Pompeian houses. It was evidently there laid down as a guide for the placing of the table and couches at the dinner hour. An example occurs in the *triclinium* of the great *Fullonica* in Pompeii, and other instances are to be found in various houses in that city.

[b] The dimensions of the rooms in the house were as follows, the first measure being from east to west, the second from north to south: (1) 16 feet 2 inches by 22 feet 4 inches; (2) 12 feet 9 inches by 7 feet 9 inches; (3) 7 feet 10 inches by 12 feet 9 inches; (4) 20 feet 4 inches by 8 feet 10 inches (mean); (5) 20 feet $4\frac{1}{2}$ inches by 13 feet 9 inches; (6) 20 feet 10 inches by 18 feet 9 inches; (7) 20 feet 10 inches by 9 feet; (8) 20 feet $10\frac{1}{2}$ inches by 15 feet; (9) 18 feet 11 inches by 10 feet 8 inches; (10) 20 feet $10\frac{1}{2}$ inches by 9 feet 10 inches; (11) 6 feet 11 inches by 8 feet 7 inches; (12) 20 feet 7 inches by 13 feet $1\frac{1}{2}$ inch; (13) 11 feet 8 inches by 8 feet 7 inches; (14) 54 feet 2 inches by 12 feet 3 inches; (15) 6 feet 6 inches by 6 feet 10 inches, and afterwards 13 feet 10 inches by 3 feet 6 inches; (16) 13 feet 10 inches by 10 feet $4\frac{1}{2}$ inches; (17) 14 feet 6 inches by 11 feet

In the north-west corner of the outer courtyard was found, at a depth of 15 inches beneath its pavement, a small circular hearth, somewhat like those found in *Insulæ* IX. X. XI. XII. and XIII. It was not, however, of the same dimensions, and had probably a different use; it was also, no doubt, of earlier date.

Having now dealt with the plans and general arrangement of the two houses of *Insula* XIV., which formed the chief discovery of the season of 1895, it will be as well to say something more of what remains of their principal adornments, viz. the mosaic pavements discovered in each, and such traces as could be found of their mural paintings.

First, as to the tessellated pavements.

The first impression conveyed to the eye by these floor mosaics is that of a predominance of black and white in the designs. But, although the leading lines are always black and the grounds invariably white, a second glance will show a variety of colouring not perceived at the first moment. In the pavements of chambers 22 and 27 of House No. 1, besides the invariable black and white, we have a scarlet and purple red, a greenish and orange yellow, a blueish, a greenish, and a brownish gray. All the best specimens of mosaics in this country show as much variety of colouring as here named, and more where figure subjects occur.

The materials of which these floors are composed are, with very few exceptions,[a] all of native stones or Purbeck marble; the principal exception being in the composition of the bright red *tesseræ*, which are always of brick, whether employed in the larger form as a ground for the finer work or as smaller cubes in the finer work itself.

The *tesseræ* of which the finer mosaics are composed are on the average $\frac{1}{2}$ inch square, and this may be considered the standard of size for all the finer mosaic work in this country. Many *tesseræ* are less than the size named and a proportion exceed it, but the average is as here stated. The *tesseræ* are by no means always exactly squared, and the joints have not the closeness and accuracy of fitting to be seen in the tessellated marble work of Italy. It may be that the coarser materials

$7\frac{1}{2}$ inches; (18) 21 feet 8 inches by 25 feet 3 inches; (19) 21 feet 6 inches by 20 feet 4 inches; (20) 22 feet by 18 feet; (21) 13 feet 10 inches by 8 feet; (22) 6 feet 6 inches by 8 feet; (23) 9 feet 4 inches by 28 feet 7 inches; (24) 9 feet 4 inches by 7 feet 9 inches; (25) 8 feet 3 inches by 8 feet; (26) 8 feet by 8 feet 2 inches; (27) 8 feet square; (28) 15 feet by 26 feet 10 inches. The average thickness of the walls is 2 feet.

[a] The statement sometimes made that foreign materials (more especially Palombino for the white grounds) were employed in British mosaic floors is erroneous. It is possible that an occasional example of the use of foreign marbles may have been noted in London, for instance, but doubtfully anywhere else.

of the British mosaics did not permit of the same nicety of workmanship which is possible in marble.

The pavements of chambers 22 and 27 of House No. 1 are good examples of two great divisions into which most of our mosaics may be divided: 1. Those in which single black lines form the principal geometric divisions of the pattern, often mixed with panels of braid and other work; and, 2. Those in which the pattern is formed by bands of braidwork or *guilloche*, the panels resulting from the intersections of the bands being usually filled in with floral or other ornaments or figure subjects. Possibly the first division is the older of the two, the second relying for effect on ever-increasing elaborate combinations of braidwork bands.

A somewhat exceptional design was found in the floor of chamber 23 in the same house. Black fretwork on white ground is largely employed in Romano-British mosaics, but is rarely found unmixed with coloured ornamentation. Such combinations of black and white only, as seen in this floor, are perhaps of early date. It may also be said that the thinner the line of the fret upon the white ground the earlier it is likely to be.[a]

Before passing to the general consideration of the mosaics of House No. 2, reference must be made to one other fact which has already been noted, the irregular disposition of the panels of finer work in the various chambers of the house first described. These panels were so laid that they did not occupy the centre of the floor space, but had on one or two, or even three sides, a wide margin of the red ground in which they were set. This curiously irregular disposition is occasionally found in other mosaic floors in this country, and is worthy of careful record, as it can scarcely be doubted that it indicates the position occupied by the furniture of the room in which it occurs. The elaborate mosaic panels would be left uncovered, while presses, cabinets, couches, etc. would be ranged upon the broad spaces of common red ground, on one or other or both sides of it.

House No. 2 had lost what were probably its best pavements, but those which were left are worthy of remark, though not for their beauty. In chambers 5 and 6 of the principal range the large central panels were quite gone, and the broad

[a] A good example of fretwork mixed with panels of braidwork is to be found in the principal pavement of a villa at Box Moor, Herts. (*Account of Excavations on the site of two Roman Villas at Box Moor, Herts*, by John Evans, F.S.A., from *Archaeologia*, xxxv. 56-69.) Another may be seen in a pavement discovered in the Blackfriars at Leicester in 1754, figured in Nichols's *History of Leicestershire*, vol. i. part i. plate viii. A far finer one occurs in the southern division of the *triclinium* of the Roman villa at Chedworth, in Gloucestershire, which, so far as we are aware, has never yet been published.

bands of coarse mosaic which surrounded them were in a very fragmentary state. These bands, of drab stone and red *tesseræ*, are a feature not found in the floors of House No. 1. They lessened the size of the more finely-worked panels, and were a cheap expedient for giving effect. In both 5 and 6 the red-tile grounds in which the panels, with their borders, were set, showed a broad stripe, in No. 5 on the east side, in No. 6 on the west, opposite the door of entrance from the corridor, possibly for the reason we have already mentioned. The wide band of a blackish blue colour round the panel in chamber 6 was of brick *tesseræ* burnt almost to vitrification. This burnt brick is one of the exceptions to the usual materials previously mentioned, and it has occurred in other mosaics at Silchester.

It will be seen that the tessellated pavements discovered last year are of considerable interest, not only for the beauty of the designs of some of them, but from the illustration they afford of the gradual decline of the art of mosaic from the excellent specimens of House No. 1 to the poor example in the *triclinium* of House No. 2.

After the mosaic floors, though perhaps first in importance as far as decorative effect is concerned, come the mural paintings with which Romano-British houses were profusely adorned. The remains of such paintings at Silchester are scanty indeed, but from the two houses described we have been able to gather a certain number of specimens. They show that the colours and methods of work were the same as those employed in Italy, though possibly with less skill and refinement.

The fragments of painted wall decoration, with two exceptions, were turned up in various places, and cannot be assigned to any particular chamber in either house. The exceptions are the painted plaster from the *lararium* in House No. 2, and from chamber 22 in House No. 1. The fragments may be classed as follows: representations of drapery, imitations of marbles, architectural forms, and floral and other ornaments.

Of the two or three specimens showing draperies one is of a gold colour with the folds dependent from shaded lines, probably imitations of mouldings. This fragment may be part of a painting representing a hanging round the lower part of a room; such a hanging as was depicted as a dado on the walls of a villa found at Comb End, in Gloucestershire.[a] Other fragments are possibly portions of draped figures.

The imitations of marbles come doubtless from dadoes, though the panels there painted may have been continued upwards as pilasters framing variously coloured

[a] Samuel Lysons, *Reliquiæ Britannico-Romanæ* (London, 1817), ii. pl. 1.

spaces. Dadoes representing marbles are to be found in the Pompeian houses, and there, as here, the representation is not an attempt to slavishly imitate in colour and texture the real substance, but is a true picture of the marble; a far higher form of art. The imitations hitherto found at Silchester include a kind of breccia, giallo-antico, porphyry, and what looks like some kind of granite.

An equally marked way of dividing the wall spaces was by painted columns.[a] Only one piece of wall plaster showing this method has yet been found, as far as we are aware, at Silchester, and this occurred in the ruins of the baths attached to the *hospitium* (*Insula* VIII). It probably came from the walls of the *apodyterium*. Some fragments, on which shaded lines are to be observed, may represent mouldings intended as borders of plain coloured grounds.

Of ornament other than what has been named there are one or two fragments, some of part of a dolphin.

A number of pieces of wall plaster from chamber 22, House No. 1, are of special interest. They were turned up from a heap of rubbish just north of that chamber, and had evidently been shovelled away from its floor when the hypocaust beneath it was plundered of its tiles. The pattern on these fragments exhibited (see fig. 5) a series of rings and hollow squares of a gray colour upon a dark claret-red ground, linked together by lines of ears of barley, with intermediate centres of blue rosettes. From the circles alternating with the squares ran diagonal lines of leaves and berries, which touched at their ends the bands of green and black bordering the composition above and below. From the angles of the squares ears of barley started diagonally also. The whole band of ornament probably constituted part of the dado of the chamber.

It is worth noting in this composition the use made of ears of barley, which the sight of the harvest fields round the Roman city suggested to the painter. Not only are ears of barley represented, but also the flower so frequently found growing amongst the corn, the corn-cockle; if, indeed, the dull lilac quatrefoil placed above the gray circle and repeated below it may be taken for this flower. As the painters of southern Europe drew their decorative forms from the flora around them, from the vine, the myrtle, and the acanthus, so also did the artists of our northern island.

Likewise to be noted is the strong similarity in the technical methods practised here and in Italy. After the walls had received their finishing coat of plaster, the setting-out lines of the decoration were drawn upon the surface of the wall with

[a] See for a good example of this class of decorative painting, E. T. Artis, *The Durobrivae of Antoninus* (London, 1828), pl. 32.

some sharp instrument, probably a *stylus*. The ground colours were then applied, and the incised lines showing through them served as guides for the application of the ornamentation. Traces of these setting-out or guide lines are to be seen in the fragments last referred to, and, as they are filled by the ground colour, they

Fig. 5. Diagram showing restoration of pattern of a painted dado in House No. 1, *Insula* XIV. ¼ linear.

must have been incised in the plaster-surface before it received any colouring. This process appears to have been used in decorative painting in Pompeii. It is very clearly displayed in one of the chambers of a house in Regio V. of that city,[a] where the main divisions of the ornamentation are thus incised in the plaster of the walls.

[a] *Insula* II. Decumanus major.

What medium was used with the colours is a matter of conjecture. Possibly the process employed in applying them was that known in modern times as fresco-secco, in which the walls, being prepared as for fresco, are re-wetted with water charged with lime, and painted upon while still damp. This method implies rapid execution on the part of the painter. The quick touch and decision seen in the fragments of painted work from Silchester would favour the idea that this might have been the process employed there. At the same time the paintings may have been executed in ordinary tempera, size being used as a medium, though this is very unlikely.

As yet we have too few specimens to form any judgment on the merits of the mural paintings which adorned the houses at Silchester.

The walls of the buildings having disappeared, we can only guess at the disposition of the decorative paintings. It must, doubtless, have been governed by constructive arrangements. In Pompeian houses the ordinary rule was to divide the painted wall-spaces of the chamber into three: (1) a dado running round the bottom of the room; (2) panels above it; and (3) above them a frieze of varying depth. The same system appears to have prevailed in Romano-British dwellings, but modified very possibly in the proportions of the different divisions. For instance, the eastern range of rooms of House No. 1, which in all likelihood had no floor above it, was lined on either side by a corridor, necessitating the placing of the windows of the chambers above the roof line of those corridors. In this case the frieze in the decorative arrangement of the chambers would probably correspond to the depth of the windows, and its depth would govern the setting out of the remaining wall-space.

The colours most frequently used for the grounds of panels appear to have been different shades of red, and next in frequency yellow. Blue was of rare occurrence, and neither white nor green was common. Very little architectural detail has been found so far in the houses at Silchester. For this reason we are compelled to believe that, for decorative effect, colour and mosaic were relied on rather than form. How far the love of colour prevailed may be seen in the fact that even the roughest chambers were ornamented with painted work. The fragments of rude plastering, which could only have come from the offices of the houses of which we are treating, have lines of red upon them, and even the walls of the small dark guard-houses of the west gate of the city bore traces of colour.

So little remains, however, of those wall decorations that it is only by an effort of the imagination we are able to realise the effect of the series of brilliantly painted chambers, with their mosaic floors, which constituted the more considerable

part of the two extensive mansions we have been examining. Yet a careful consideration even of the scanty fragments discovered, and their comparison with more important remains on other sites in this country and in Italy, enable us to call up a picture of the internal aspect of the houses of the Roman city with more certainty than might at first sight be considered possible.

As usual, a large number of miscellaneous antiquities were discovered during the excavations.

The coins found were comparatively few in number, and of no special interest.

Besides the blue glass bowl already described, considerable portions of another pillared vessel of clear glass were recovered, as well as the greater part of a square bottle. Many fragments of a pane of clear window glass were also found, but not in sufficient quantity to enable its size to be ascertained. A certain number of beads were picked up; also some pieces of a red crystalline deposit which was at first supposed to be enamel, but Professor Church pronounces it to be realgar, a substance that does not seem to have hitherto been recognised on any Romano-British site.[a]

The objects in bone included numerous perfect pins and needles of various patterns, and a large piece of ornamental inlay.

Among the bronze objects may be mentioned, besides the ordinary brooches, etc. a curious mass of small nails, evidently from some bronze-worker's shop; an exceptionally perfect *stylus;* a pair of long tweezers; several good examples of *ligulæ;* a small and narrow boat-shaped vessel, perhaps for pouring out a liquid by drops; and an iron plate with ornamental bronze studs.

The iron remains, as usual, included a number of interesting objects, such as the bottom of a hanging lamp-stand, knives of various sizes and shapes, *styli,* keys of different patterns, small shears or clippers, a mason's trowel, a hammer, a pair of compasses, a small anvil, and the heads of two javelins.

Several good examples of lead weights, including some for steelyards, complete the tale of the principal objects in metal.

[a] Professor Church, F.R.S., F.S.A., has kindly communicated the following note on this discovery: "My conjecture as to the nature of the orange-red crystalline substance found at Silchester proves to be correct. The material is realgar, arsenic sulphide (in chemical formula $As_2 S_2$). It is the Σανδαράκη of Theophrastus, the Sandaracha of Pliny. It occurs native (as a mineral) not only in India and China but in many European localities. Amongst the latter the most interesting to you are the Solfataras near Pozzuoli, Tolfa near Civita Vecchia, and Vesuvius. It was certainly employed in ancient paintings, but I do not recall any other use. I feel sure that it has never before been recognised (even if found) on any Roman site in Britain. Realgar has long been prepared artificially, but I am inclined to think the Silchester material is the native mineral."

Besides the pottery already mentioned, a considerable number of perfect or nearly perfect vessels of other well-known kinds was found. One of these was a fine bowl of unusual form (see fig. 6), ornamented on the outside with a triple band of overlapping scales and covered with a greenish-yellow glaze; the bottom, as will be seen from the section, is bossed after the manner of some Greek vessels of a well-known type. Among the many fragments may be noted two pieces of a pseudo-Samian bowl of superior design, with a figure in a chariot drawn by a centaur, moulded in slight relief; also two heads of Mercury and (perhaps) Venus, modelled in high relief, from the sides of a vase of black glazed ware.

Fig. 6. Glazed bowl (and section) found in *Insula* XIV. (¼ linear.)

The accompanying block-plan (fig. 7) shows the progress made in the excavation of the city.

Fig. 7. Block-plan of Silchester, showing portions excavated down to October 1895.

APPENDIX.

Note on a Roman force-pump found at Bolsena, Italy, now in the British Museum.

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A PUMP found at Bolsena, and now in the British Museum, of which a drawing in section (Fig. 8) is here given, is of the type known as plunger or force-pumps. This pump is identical in principle with that found at Silchester in 1895, though in some constructional details and in the material employed it does not correspond with the Silchester example.

The Bolsena pump consists of two bronze barrels (AA), $1\frac{3}{8}$ inch in diameter, disposed vertically and parallel to each other, connected at their lower extremities by branches at right angles to the barrels and by short horizontal ports or pipes (BB) to a central tee (C); this served the purpose of a clack-box or valve-chamber for an outlet valve for each barrel, and is provided with seats for those valves.

The two valves (EE) still occupy their proper position on their respective seats, but in consequence of corrosion are unmovable.

Of the two inlet valves and valve-seats, one valve (F) and one seat only (G) were found, but they are not in place, and were doubtless contained in chambers or clack-boxes jointed to the lower extremities of the barrels below the discharge branches.

The valves are of the type known as flap-valves, as contradistinguished from spindle or pot valves.

The water, after being discharged through the outlet valves, was delivered into the vertical member of the central tee, which was common to both pumps, and thence through a vertical pipe, which, though missing, was doubtless jointed to the spigot with which the vertical member of the tee is provided. This vertical delivery pipe would now be defined as the "rising main."

Corroded into each barrel is a bronze socket (HH) into which were fitted the plungers or pistons. These were probably of wood covered with leather, or if the Romans were cognisant of the self-lubricating quality of *lignum vitæ*, that material may have been employed without any covering of leather.

At the upper extremity of each plunger-socket is a lug or eye of quite modern design drilled to receive bolts or pins to which were attached the connecting or spear-rods.[a]

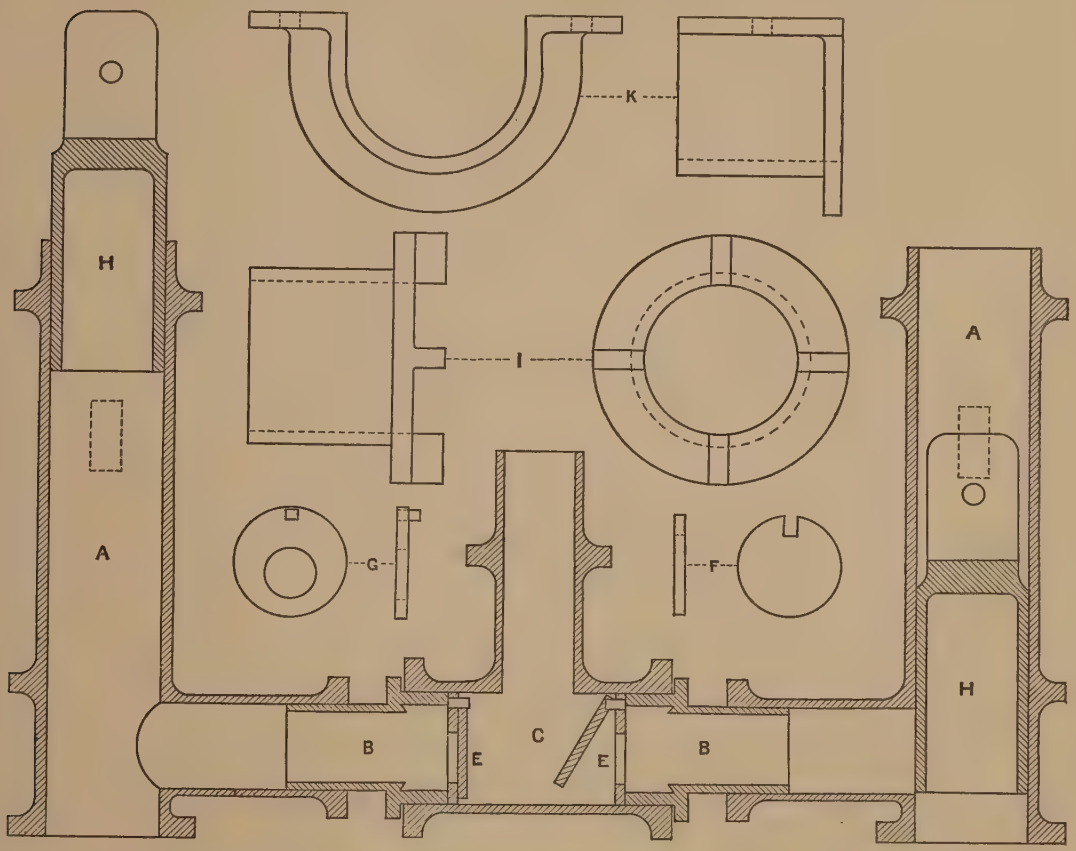

Fig. 8. Roman bronze force-pump found at Bolsena, Italy. Now in the British Museum. ½ linear.

A reciprocating motion was given to the plungers through the connecting rods, and was doubtless accomplished by means of a beam on a rocking shaft or pivot.

With the Bolsena pump were found a bronze bush or boss (I), and a bracket or clip (K) which fits the bush. The bush doubtless formed the pivot of the wood beam, and the bracket as certainly served as the bearing on which the beam rocked.

In Smith's *Dictionary of Greek and Roman Antiquities* the pump invented by Ctesibius is illustrated by a diagram, from which it will be seen that this hypothetical illustration very nearly

[a] It may be noted that the plunger socket of one barrel has dropped to a lower position in the barrel than it would ever reach when in work, and has there become fixed by corrosion.

corresponds with the Bolsena pump. But in the diagram, through an error on the part of the draughtsman, the two valves of one barrel are shown open, the two valves of the other closed. Of the two valves of one barrel, the inlet should have been shown open and the outlet closed; of the two valves of the other barrel, the inlet should have been shown closed and the outlet open.

There is another pump to be seen at the British Museum, also found at Bolsena, of a more advanced type than the pump I have described. I have selected for illustration the one described as more nearly corresponding to that found at Silchester.